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THESIS

**EVALUATING THE ACCOMPLISHMENTS OF THE
COOPERATIVE THREAT REDUCTION PROGRAM**

by

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December 2000

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**EVALUATING THE ACCOMPLISHMENTS OF THE
COOPERATIVE THREAT REDUCTION PROGRAM**

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ABSTRACT

This thesis offers an analytical survey of evaluations of the effectiveness of the U.S.-sponsored Cooperative Threat Reduction (CTR) program. The CTR remains the principal source of U.S.-Russian interactions regarding WMD proliferation. Russia's internal problems, including political, economic, military and social instability, have created the risk that rogue states or terrorists may attempt to exploit the uncertainties in Russia to buy or steal nuclear weapons and/or materials and/or to acquire the expertise to develop a nuclear capability. This thesis explores four competing perspectives in the United States on the accomplishments of the CTR's nuclear agenda. The key points of discord among the competing schools of thought include the significance of limitations on the ability of the United States to effectively monitor and accurately assess the contributions of the program, and the expansion of the program to include projects that do not directly concern weapons dismantlement. This thesis concludes that the CTR's contributions to countering WMD proliferation could be more effectively pursued if the United States enhanced the quality of the CTR and worked cooperatively with Russia to address the full spectrum of common interests. The thesis also finds that if Russia fails to develop an enduring safeguard culture much of the CTR assistance may prove to have been of no avail.

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TABLE OF CONTENTS

I. INTRODUCTION	1
A. THESIS OBJECTIVES	5
B. IMPORTANCE AND RELEVANCE	6
C. METHODOLOGY AND SOURCES	7
D. CHALLENGES AND LIMITATIONS	11
E. CHAPTER OUTLINE	14
II. FOUR SCHOOLS OF THOUGHT: INTERPRETING THE COOPERATIVE THREAT REDUCTION PROGRAM	17
A. UNCONDITIONAL SUPPORTERS – A BLANKET ENDORSEMENT	19
B. PROGRAM ADVOCATES	23
C. STRONG CRITICS	28
D. COMPLETE ADVERSARIES	34
III. KEY ISSUES OF DISCORD	41
A. REMNANTS OF THE SOVIET UNION: FOUR NUCLEAR SUCCESSOR STATES	41
1. Belarus	48
2. Ukraine	51
3. Kazakhstan	54
B. TRANSPARENCY IN NUCLEAR WARHEAD DISMANTLEMENT AND FISSILE MATERIAL OPERATIONS	56
C. FEDERAL AGENCIES SHARE CTR RESPONSIBILITIES AND COSTS	63
D. EXPANDING THE CTR: “MISSION CREEP” AND “SLIPPERY SLOPES”	67
IV. THE CTR PROGRAM: FUTURE PROSPECTS.....	73
A. CTR PROGRAM ADDRESSES FULL SCOPE OF RUSSIAN THREATS	73
B. BEYOND THE NUCLEAR ARENA	75
C. INTERNATIONAL EVENTS UNDERMINE CTR PROCESS	76
D. BUILDING A NONPROLIFERATION CULTURE	80
INITIAL DISTRIBUTION LIST	83

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EXECUTIVE SUMMARY

When the Soviet Union dissolved and the Cold War ended, new risks associated with Russia emerged. The Soviet Union's collapse fragmented the strict control once exercised over the Soviet nuclear arsenal. Moreover, Russia's internal problems, including political, economic, military and social instability, have created the risk that rogue states or terrorists may attempt to exploit the uncertainties in Russia to buy or steal nuclear weapons and/or materials and/or to acquire the expertise to develop a nuclear capability.

One of the major U.S. initiatives for combating WMD proliferation risks has been the Cooperative Threat Reduction (CTR) program. The CTR program is intended to enable the United States to work jointly with the republics of the former Soviet Union to help them reduce, eliminate, and/or safeguard their weapons of mass destruction (WMD) and related infrastructures. Among other purposes, the CTR program aims to prevent any trafficking in "loose nukes" and to inhibit the "brain drain" – that is, the immigration of former Soviet weapons experts to WMD proliferant states.

This thesis offers an analytical survey of evaluations of the effectiveness of the U.S.-sponsored CTR program. While the CTR program has been formally extended to all forms of WMD proliferation, nuclear activities present the greatest amount of controversy and the most significant cooperative challenges. This thesis is therefore dedicated to examining evaluations of the accomplishments of the CTR's nuclear agenda.

To date, the U.S. government has allocated over \$4 billion dollars for CTR-sponsored projects, and the 1999 protocol, which extends the program through June 2006, has continued an upward trend in spending. As with many controversial and costly

programs, skeptics question the value of the CTR program. The majority of U.S. literature on the CTR reflects four competing perspectives which together encompass the full spectrum of published analytical assessments.

At one extreme is the school of Unconditional Supporters who fully endorse the CTR program. Proponents of this school maintain that the CTR program actively prevents proliferation by reducing the WMD arsenals in the former Soviet republics and by providing greater security for fissile materials and other WMD-related assets. At the other extreme are Complete Adversaries who denounce the CTR program as a threat to U.S. national security. Complete Adversaries argue that U.S. defense dollars are supporting the dismantlement of obsolete Russian weapons, thereby saving Russia money and subsidizing Russia's military activities, including strategic nuclear modernization programs.

Between the extreme viewpoints lie two additional schools of thought – Program Advocates and Strong Critics – which present more temperate positions. While Program Advocates are strongly committed to the success of the CTR program, they acknowledge its shortfalls and the obstacles (primarily bureaucratic resistance and political vulnerability in both the United States and recipient countries) that the CTR program must work around and within. On the opposite side of the spectrum are Strong Critics who are concerned about the commitment of CTR resources to areas beyond WMD proliferation. In their view, the CTR program is being used as a “catch-all” to address problems that are clearly beyond the realm of the congressional mandate.

Several aspects of the CTR program remain consistent points of contention among the four schools of thought. This thesis explores four key points of discord

associated with the CTR program: the transfer of strategic nuclear weapons from the non-Russian nuclear successor states to Russia; the lack of transparency in Russia's fissile material operations and warhead dismantlement programs; the distribution of CTR responsibilities among U.S. federal agencies; and the expansion of CTR programs beyond the realm of WMD dismantlement, safety, and security.

The CTR program remains a principal source of U.S.-Russian interactions regarding WMD proliferation and associated safety and security matters. Evidence suggests, however, that neither country has provided enough funding and sustained political attention to make these efforts fully successful. This thesis concludes that the CTR program's contributions to countering WMD proliferation could be more effectively pursued if the United States enhanced the quality of the CTR and worked cooperatively with Russia and the other nuclear successor states of the former USSR to address the full spectrum of common interests.

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I. INTRODUCTION

The Cooperative Threat Reduction (CTR) program is an American initiative to work jointly with the republics of the former Soviet Union to help them reduce, eliminate, and/or safeguard their weapons of mass destruction (WMD) and related infrastructures. Among other purposes, CTR aims to stem the proliferation of “loose nukes” and to inhibit the “brain drain” – that is, the immigration of former Soviet weapons experts to WMD proliferant states. Initial CTR nonproliferation efforts in the early 1990s focused exclusively on the former Soviet nuclear arsenal. By the mid-1990s, CTR nonproliferation programs gradually expanded to include chemical and biological weapons as well. While all forms of WMD present significant proliferation dangers, the nuclear programs remain the principal focus of the United States.

The nuclear nonproliferation initiative began in 1991 as the Soviet Threat Reduction Act. When the program was first initiated, the United States envisioned a program with the Soviet Union based on cooperation and extensive transparency. The United States wanted to begin with an inventory of the Soviet nuclear warhead arsenal. Once tagged, the warheads were to be monitored through completion of the dismantlement process. There were even hopes of international oversight of the fissile material once in storage. The Soviets, however, made it clear that they did not want, nor did they need, assistance in dismantling nuclear warheads and that foreign governments would not be permitted oversight of this process.¹ Working within the boundaries set by

¹ U.S. General Accounting Office, *Weapons of Mass Destruction: Reducing the Threat from the Former Soviet Union*, Letter Report, 10 June 1994. GAO/NSIAD-95-7.

the Soviet authorities, the United States agreed to help the Soviet Union dismantle nuclear delivery systems such as missiles, bombers, strategic submarines and missile silos.

When the Soviet Union broke apart in December 1991, the U.S. initiative was restructured as the Cooperative Threat Reduction program. The efforts initially focused on the four nuclear successor states – Russia, Ukraine, Kazakhstan and Belarus – which inherited the Soviet strategic nuclear arsenal and its extensive infrastructure. The first priority of the United States was to consolidate the strategic warheads under the command and control of one authority – Russia. Once the warheads were transferred to Russia, efforts to prevent the transfer of nuclear weapons, materials, technology and expertise to third parties were added to the program. Under the CTR program, instead of providing cash to fund the weapons reduction process, the United States provides equipment, technical assistance, support and training. In most cases, U.S. nuclear experts who work with former Soviet scientists and engineers to safeguard and dismantle Russia's nuclear arsenal use equipment built in the United States.

The U.S. Department of Defense (DoD) is the executive agency for the CTR program. By the mid-1990s, activities under the CTR umbrella were extended to other agencies, including the U.S. Departments of Energy (DoE) and State (DoS). The contributions of each department are specifically focused to maximize the benefits of its expertise. The DoD is primarily involved in expediting the elimination of strategic offensive systems pursuant to the START treaties. Efforts by the DoE are primarily focused on upgrading the security at nuclear weapons and fissile material storage sites as

well as redirecting the talents of former weapons experts to peaceful ventures with commercial applications. The Department of State is also a key player in curbing transnational proliferation, a principal concern of both the United States and the former Soviet republics. The DoS works to strengthen export controls and to improve the ability of border control officials to intercept the illegal transport of nuclear materials and nuclear-related technology.

In 1999, Congress voted to extend the CTR program through the year 2006. The extension, referred to as the CTR Umbrella Agreement, is evidence of the sustained commitment within both the legislative and executive branches of the U.S. government to the CTR's nuclear security agenda. This phase of the nonproliferation effort is formally known as the Expanded Threat Reduction Initiative (ETRI). Introduced in fiscal year 2000, the initiative represents a collection of programs led by the U.S. Defense, Energy and State Departments that provide nonproliferation assistance to the former Soviet republics. The introduction of ETRI marks the beginning of the CTR program's sustainment phase. Unlike the early development phase, in which new projects were initiated, during the sustainment phase resources are reserved for existing projects.

While an extension of the CTR for seven years is highly significant and reflects a strong U.S. commitment to nonproliferation, the ETRI also includes more restrictions and funding limitations than earlier CTR efforts. United States support is limited to projects which directly support core congressional priorities. The 2000 National Defense Authorization Bill, for example, meets and in many cases exceeds the President's budget

requests for nuclear weapons-related projects. Projects that do not receive near-equivalent funding from the host republics or that lack clear and tangible benefits to U.S. national security usually fold when U.S. support is terminated. Members of Congress considered the costs of the chemical weapons destruction facility, for example, exorbitant and out of proportion with the prospective benefits. This project was consequently terminated in the 2000 National Defense Authorization Bill.² In addition, the 2000 National Defense Authorization Bill permanently restricts the use of funds for non-defense-related activities such as peacekeeping, housing for retired Russian Strategic Rocket Force officers, environmental restoration, and defense conversion.

The ETRI and the restrictions introduced in the 2000 National Defense Authorization Bill are likely to influence future U.S. support for nonproliferation programs in the former Soviet Union. The United States now has nearly ten years of threat reduction experience. Over the years, the CTR program has become more efficient and its funding more streamlined, yet opposition to the program and reservations about Russian intentions and prospects are still prominent and threaten U.S. congressional support.

² Congress, House of Representatives, House Armed Services Committee, *Title XIII Cooperative Threat Reduction With States of the Former Soviet Union* found in FY 2000, National Defense Authorization Bill, Report No. 106-162, 106th Congress, 1st Session, 24 May 1999. Also see U.S. General Accounting Office, *Weapons of Mass Destruction: Effort to Reduce Russian Arsenals May Cost More, Achieve Less than Planned*, 13 April 1999. GAO/NSIAD-99-76.

A. THESIS OBJECTIVES

This thesis offers an analytical survey of evaluations of the effectiveness of the U.S.-sponsored nonproliferation effort known as the Cooperative Threat Reduction program. While the program has been formally extended to all forms of WMD proliferation, the main focus of the United States efforts, along with the majority of funds, has been the nuclear aspects. In addition to consuming the majority of resources, the nuclear programs also present the greatest amount of controversy and the most significant cooperative challenges. This thesis is therefore dedicated to examining evaluations of the accomplishments of the CTR's nuclear agenda. While this thesis reviews assessments of the effectiveness of the CTR program, it is not intended to present an exhaustive critique of each project sponsored under this program.

Evaluations of the CTR frequently raise the following questions:

- Is the CTR program effectively curbing the threats of “loose nukes” and “brain drain” created as a result of the disintegration of the Soviet Union and the subsequent economic crisis?
- What factors account for the primary changes in CTR policy over the life of the program? How have the changes affected the program?
- What accounts for the survival of the CTR program despite the extensive criticism? What factors explain the concrete gains achieved by some projects, while others have folded?

- Should U.S.-mandated requirements, such as increased transparency and a balanced funding formula, be necessary stipulations for continued U.S. support of the CTR program?
- Have NATO policies such as the enlargement of the Alliance and the bombing in Yugoslavia affected efforts to stem WMD proliferation in the former Soviet republics?

When the Soviet Union dissolved and the Cold War ended, new risks associated with Russia emerged. Indeed, many experts argue that today's risks are even greater than those during the Cold War. In contrast with the Cold War situation, the risks associated with Russia today stem from its weakness and not its strength. The Soviet Union's collapse fragmented the strict control once exercised over the Soviet nuclear arsenal. Moreover, Russia's internal problems, including the country's political, economic, military and social instability, have created the risk that rogue states or terrorists will exploit the uncertainties in Russia to buy or steal nuclear weapons and/or materials and/or to acquire the expertise to develop a nuclear capability.

B. IMPORTANCE AND RELEVANCE

The Cooperative Threat Reduction program plays a pivotal, though highly controversial, role in the U.S. government's efforts to cope with the expanded challenges of weapons of mass destruction (WMD) that have emerged in the post-Soviet period. The United States has a significant stake in this problem because of the danger that nuclear weapons, materials, technology or expertise could be obtained by terrorist groups or rogue states. Based on congressional direction, the CTR program supports core U.S.

national security priorities by implementing strategies to combat the spread of nuclear weapons and supporting infrastructures. The CTR program provides assistance to the newly independent states (NIS) of the former Soviet Union to dismantle and destroy nuclear weapons, to strengthen the security at nuclear weapons and fissile material storage sites, to prevent proliferation, and to help demilitarize the industrial and scientific infrastructure which supports the former Soviet nuclear posture.

To date, the U.S. administration has allocated over \$4 billion dollars for CTR-sponsored projects, and the 1999 protocol, which extends the program through June 2006, has continued an upward trend in spending. As with many controversial and costly programs, skeptics question the value of the CTR program. U.S. critics of the CTR program have stated that Russia's nuclear security practices, military goals, and inability to fund its share of cooperative projects undermine the prospects for success of the CTR's proliferation prevention efforts. This thesis explores the U.S. discussion about the CTR program and its effect on curbing the threat of weapons proliferations. Most Americans agree that the United States must actively address the weapons proliferation threat before it is beyond control. Assessing the full spectrum of criticism and support for the CTR program may help to provide a foundation for decisions to eliminate costly and ineffective projects while improving those which demonstrate concrete gains.

C. METHODOLOGY AND SOURCES

This thesis is based on U.S. literature about the CTR. The sources encompass journalistic and scholarly discussions as well as various types of government documents, including congressional hearings and reports. Publications by advocates and critics are

relatively abundant and cover issues affecting the full scope of the CTR program's history.

While the most controversial and heavily debated issue for both advocates and critics of the CTR program concerns its ability to curtail the proliferation of WMD from the former Soviet Union, little official government material appears in open sources that can conclusively demonstrate this result. Testimony by the U.S. General Accounting Office (GAO) before the U.S. Senate Subcommittee on Emerging Threats and Capabilities in March 2000 disclosed concerns about the government's inability to prove that the CTR program has achieved its intended purpose. Officials from the GAO noted that they have "relative confidence" that the DoD played a tangible role in helping the former Soviet republics comply with their arms control treaty obligations. However, GAO officials added, "conclusively demonstrating that most of these programs have a positive impact [on U.S. national security] has proven to be very difficult."³

The GAO testimony characterized the CTR program as an "inherent cost risk" because of the difficulty of demonstrating any positive impact. The GAO assigned primary blame for the lack of conclusive evidence to Russia's reluctance to provide the United States with access to sensitive nuclear materials and facilities. According to GAO officials, Russia's concern about divulging state secrets has denied the DoD the ability to monitor the implementation of the programs and to confirm that U.S. assistance is being used as intended.⁴

³ U.S. General Accounting Office, *Weapons of Mass Destruction: U.S. Efforts to Reduce Threats From the Former Soviet Union*, 6 March 2000. GAO/ T-NSIAD/RCED- 00-119.

⁴ Ibid.

Adding to the complexity of the situation, most of the verification problems involve nuclear-related projects which consume the majority of CTR funds. These projects include nuclear warhead elimination, fissile material storage, security system upgrades of laboratories and weapons storage sites, and programs to supplement the salaries of former Soviet weapons scientists. The result has been a high degree of skepticism, even among some CTR supporters. The skepticism has continued to mount as more funds have been consumed without mechanisms to verify the program's specific applications and effects.

This thesis attempts to identify the roadblocks discussed in the U.S open-source literature on the CTR program. These roadblocks have evidently prevented comprehensive assessments of the CTR program's contributions. While Russia's secrecy surrounding its nuclear program is a primary obstacle, some assessments of the program indicate that Russia is not solely responsible for the roadblocks.

This thesis begins its evaluation by exploring four schools of thought on the CTR program. The majority of U.S. literature on the CTR reflects the perspectives of these four competing perspectives, which together encompass the full spectrum of published analytical assessments. Each of the four schools of thought appraises the CTR program on a scale that pivots on the fulcrum of U.S. national security. Their arguments, however, differ substantially. At one extreme is the school of thought which unconditionally supports all CTR activities. Proponents of this school maintain that the CTR program is one of the most effective and efficient tools by which the U.S. government can ensure a more stable international security environment. Supporters of

this school of thought maintain that the CTR program actively prevents proliferation by reducing the WMD arsenals in the former Soviet republics and by providing greater security for fissile materials and other WMD-related assets.

At the other end of the spectrum is the school of thought that consistently criticizes the majority of CTR projects and that holds that the CTR program actually endangers America's national security. These critics object to the concept of a U.S.-funded project which provides assistance to Russia. These critics argue that U.S. defense dollars are supporting the dismantlement of obsolete Russian weapons, thereby saving Russia money and subsidizing Russia's military activities, including strategic nuclear modernization programs.

The majority of analytical interpretation falls between the two extremes. Both sides of the fulcrum – that is, the two schools of thought in the middle of the spectrum – recognize the magnitude of the potential WMD proliferation dangers created by the demise of the Soviet Union, but contend that CTR programs have grown beyond their intended boundaries – for example, in constructing housing for retired Russian Strategic Rocket Force officers.

After examining the four schools of thought and their general perspectives on the CTR program, this thesis explores several key points of discord that repeatedly surface in the debate among the four schools of thought. The disagreements generally concern the significance of the limitations on the ability of the United States to effectively monitor and accurately assess the contributions of the CTR program. One primary area of contention, for example, is the transfer of nuclear warheads from Ukraine, Belarus and

Kazakhstan to Russia, where American inspectors have no independent means to verify their destruction. This transfer involved multiple factors, including agreements between the United States and each of the four nuclear successor states. This thesis also addresses factors that have contributed to disagreements on other issues affecting the CTR program, such as the extensive delay in ratification of START II by the Russian government (from January 1993 to May 2000). Russia's recent decision to increase exports of nuclear technologies to states not subject to the constraints of international monitoring, such as India, Pakistan, North Korea, Israel, Iran, Iraq, Cuba or Yugoslavia, constitutes another concern.⁵ In view of these factors and others, the final topic examined in this thesis concerns the CTR program's prospects for the future.

D. CHALLENGES AND LIMITATIONS

The very nature of this thesis topic implies research limitations. Containment of nuclear proliferation is difficult to measure. In November 1996, Secretary of Defense William Perry referred to this challenge when he called the CTR program "Defense by other means...its greatest value is not in what happens but in what does not happen."⁶ Verification of results has traditionally been the prescribed means of building and maintaining confidence in a program. It is, however, much more difficult to demonstrate results for a program whose success is inferred if something does not happen. Short of an obvious breach in nonproliferation treaty agreements, such as the launch or detonation of a weapon, the success or failure of a nonproliferation program is difficult to demonstrate.

⁵ Jamestown Foundation, "Russia Goes It Alone to Expand Sales on Nuclear Technologies," *The Monitor-A Daily Briefing on the Post-Soviet States*, Vol. 6, No. 108, 2 June 2000.

⁶ Secretary of Defense William J. Perry addresses the Society of American Engineers, Washington D.C., 20 November 1996.

The implementation of the CTR program has therefore presented evaluation difficulties. As Dunbar Lockwood pointed out in 1995, the only quantifiable means of measuring success was to count the number of agreements signed; their funding levels; and the amount of equipment, services, and training delivered.⁷

The challenge of measuring success or failure is compounded by that of determining the specific goals and priorities of the CTR program. Vague verbiage in the congressional legislation provides the flexibility needed to conduct a program of this character and magnitude; at the same time, however, this flexibility severely limits the ability of officials to identify specific and concrete objectives. The inherent flexibility of the congressional mandate has left executive organizations with the responsibility of clarifying goals and translating them into program objectives. The mandate, however, has also given the DoD enough flexibility to develop and fund CTR projects in a manner which is directly aligned with the DoD's overarching priorities. For example, the congressional legislation which authorizes the CTR program makes no specific mention of ensuring that the former Soviet republics meet the Strategic Arms Reduction Talks (START) treaty obligations. However, the DoD, as the executive agency for CTR, has made compliance with START requirements "the chief aim and ultimate 'yardstick' of the program's success."⁸

Clearly, Russia's compliance with START requirements directly supports U.S. national security objectives. A key issue in the U.S. debate about CTR, however,

⁷ Dunbar Lockwood, "Getting Down to Business," *Bulletin of the Atomic Scientists*, Vol. 51, No. 1, January 1995, p. 12.

⁸ Jason Ellis, "Nunn-Lugar's Mid-Life Crisis," *Survival*, Vol. 39, No. 1, Spring 1997, p. 88.

concerns the priority attached to meeting START requirements, which consume the majority of CTR funds – despite Russia's insistence that U.S. CTR aid serves only to accelerate Russia's implementation of its START reduction levels.⁹

Evaluation challenges are further complicated by the issue of "secondary benefits" or "broad implications" of the CTR program. Should these "secondary benefits" be considered in an evaluation, and if so, to what extent? The broader implications of the CTR program appear to be its contributions to strengthening democracy and helping the NIS make the transition to market economies. Even CTR efforts that are highly controversial, such as demilitarization and defense conversion, may provide contributions in this category. One of the principal benefits often cited by CTR advocates is that the program helps the United States build strong political and economic ties with Russia and the other former Soviet republics. Measuring the significance of the CTR in the achievement of such "secondary benefits" is obviously difficult and potentially subjective.

Attempts to make an accurate assessment of the CTR program are further restrained by Russia's secrecy surrounding its nuclear projects. Russia's propensity to rely on secrecy is not only an element of military security but also an enduring remnant of the Soviet culture and pre-Soviet Tsarist traditions. Even before the agreements were finalized in the early 1991 Soviet Threat Reduction Initiative, it was apparent that the scope of U.S. assistance would be limited by the high level of secrecy used by the

⁹ U.S. General Accounting Office, *Weapons of Mass Destruction: Reducing the Threats from the Former Soviet Union*, Letter Report, 6 October 1994. GAO/NSIAD-95-7.

Soviet Union to conceal and protect its nuclear activities. Russia's insistence that warheads from Ukraine, Kazakhstan and Belarus be consolidated in Russia and under its complete control was an initial indication that roadblocks on U.S. assistance would be created as a result of Russia's shroud of nuclear secrecy.

Owing mainly to the limitations created by Russia's culture of secrecy, the problem of inadequate transparency continues to significantly threaten U.S. congressional willingness to sustain the CTR program. Senator Richard Lugar, one of the founders of the CTR initiative, has emphasized the importance of transparency and has noted that requirements for U.S. involvement in warhead dismantlement in Russia will continue to escalate. He has indicated that there will be an increased demand for bilateral accountability and verification measures as the nuclear arsenals of both the United States and Russia are reduced. "Earlier in the process a small margin of error could be tolerated because both sides still maintained thousands of weapons. As we continue to reduce the arsenals, the importance of precise verification of warhead dismantlement will become increasingly important."¹⁰

E. CHAPTER OUTLINE

Chapter II presents four schools of thought identified through an analytical survey of the U.S. literature on the CTR program. The four schools offer competing interpretations of the program and its effectiveness. Chapter III addresses several

¹⁰ Senator Richard G. Lugar addresses the Newly Independent States Nonproliferation Conference at the Center for Nonproliferation Studies, Monterey Institute of International Studies, 11-13 December 1999, commentary on "Nunn-Lugar: The Past as a Guide to the Future," in "Assessing U.S. Dismantlement and Nonproliferation Assistance Programs in the Newly Independent States," *CNS Program: NISNP Conference*. Available Online: <http://www.cns.miis.edu/cns/projects/nisnp/ctrconf/spech03.htm>

key issues that have surfaced repeatedly in the debate among the four schools of thought. An analysis of these key issues may yield insights about the accomplishments and problems of the CTR program as well as about major changes over the life of the CTR program. Chapter IV presents conclusions. It explores the prospects of the CTR program and future challenges to its survival.

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II. FOUR SCHOOLS OF THOUGHT: INTERPRETING THE COOPERATIVE THREAT REDUCTION PROGRAM

The Cooperative Threat Reduction program has generated controversy among U.S. government officials and political analysts as well as among scholars and journalists. Their debate incorporates a wide range of perspectives and interpretations of the CTR program. Although the perspectives – here referred to as schools of thought – are diverse and often competing, improvements in the CTR program are likely to be rooted in some degree of skepticism or uncertainty. In this respect, both advocates and critics may provide means to enhance the effectiveness of the CTR program.

This chapter surveys interpretive analyses and assessments of the CTR program. Four distinct perspectives have been repeatedly expressed in various open sources, including scholarly journals, newspaper editorials, government reports, and congressional hearings. While these perspectives are not specifically labeled in the literature, they are categorized in this thesis to facilitate identification and assessment. The four schools of thought express degrees of criticism or support for the CTR. Their arguments generally emphasize particular facets of the program.

Two schools of thought are built upon uncompromising principles and rigid philosophies. They stand at extreme opposite ends in the span of CTR interpretations. The two extreme perspectives offer a contrast between those who give the CTR a blanket endorsement and those who dismiss the program outright. At one extreme is the school of Unconditional Supporters who fully endorse the CTR program, referring to it as “defense by other means,” and “a window of opportunity.” At the other extreme are

Complete Adversaries who denounce the CTR program as a threat to U.S. national security. Unwilling to dismiss Cold War suspicions, these critics of the CTR program liken Russia's level of bilateral cooperation to that of Iraq and North Korea, especially in terms of transparency and verification.¹¹

Between the extreme viewpoints lie two additional schools of thought which present more temperate positions. While these two schools theoretically oppose one another, both support CTR-sponsored projects which focus directly on denuclearization efforts. In general, these two schools are more likely to look beyond preconceived notions about the CTR program. Unlike the extreme perspectives, they typically provide constructive criticisms and recommendations for improvement instead of endorsing or denouncing the program outright. In this thesis these schools in the middle of the spectrum are called Program Advocates and Strong Critics. Program Advocates strive to eliminate problems while preserving the programs that directly promote denuclearization. Strong Critics acknowledge the need for nonproliferation programs and agree with the "spirit" of the CTR program. They contend, however, that the program has veered far off course and requires a major overhaul. According to these critics, the CTR program has been plagued with "mission creep" and "slippery slopes" which have expanded the scope of the CTR initiative to the extent that projects no longer support the program's core objectives.

¹¹ Richard F. Staar, "A Russian Rearmament Wish List," *ORBIS*, Vol. 43, No. 4, Fall 1999.

A. UNCONDITIONAL SUPPORTERS – A BLANKET ENDORSEMENT

Some Unconditional Supporters have endorsed the CTR program without reservations since its inception. Senators Sam Nunn (Democrat-Georgia) and Richard Lugar (Republican-Indiana), the bipartisan founders of the program, introduced the CTR program as a vehicle for the United States to respond to “the number one national security challenge” – “proliferation of weapons of mass destruction.”¹² Many experts contend that Russia’s social and political chaos and weakened economy have created an environment in which nuclear weapons may pose a greater threat to the United States than they did during the Cold War. According to Senator Nunn, “We have moved from an era of high risk, but also high stability, to an era of much lower risk, but also much less stability.”¹³ For more than 50 years, it is argued, the superpowers – the United States and the Soviet Union – shared an understanding of the devastating consequences of nuclear war. This shared consensus reduced the probability of a nuclear exchange. Today, the situation is very different. The Soviet Union broke apart in 1991, with fifteen successor states. The Soviet breakup weakened the stability of the former Soviet nuclear control regime, thereby creating a potentially dangerous proliferation environment. According to Senator Lugar, the present nuclear threat is a result of the collapse of the Soviet regime and the subsequent decay of the nuclear custodial system, which together

¹² Sam Nunn, “Foreword,” to John Shields and William C. Potter, eds., *Dismantling the Cold War: U.S. and NIS Perspectives on the Nunn-Lugar Cooperative Threat Reduction Program*, (Cambridge: The MIT Press, 1997) p. xx.

¹³ Sam Nunn addresses the U.S. Senate Permanent Subcommittee on Investigations Hearings on Global Proliferation of Weapons of Mass Destruction and Illicit Trafficking of Nuclear Materials, 13 March 1996, *The Nuclear Roundtable*, Background Document. Available Online: <http://www.stimson.org/rd-table/3nunn.htm>

have eliminated the “proliferation choke-point.”¹⁴

Seeking a means to restore the proliferation chokepoint, the Clinton administration established a strong team of CTR program advocates. Les Aspin, President Clinton’s first Secretary of Defense, helped to lay the foundation for threat reduction programs with the Soviet Union; and his successor, William Perry, fully supported the CTR program as a means of “preventive defense.” Perry considered preventive defense, which relies on economic and technical resources instead of traditional military force, the future direction of U.S. security strategy.¹⁵ Other members of the Clinton administration’s CTR team have included Ashton Carter, Assistant Secretary of Defense for International Security Policy in 1993-1996, who as a Harvard professor provided the conceptual framework for the CTR program; and Gloria Duffy, Deputy Assistant Secretary of Defense and Special Coordinator for the CTR program in 1993-1995, who played the lead role in negotiating threat reduction agreements.

President Clinton’s administration has remained loyal to the school of Unconditional Supporters. The President’s 1999 State of the Union Address emphasized the importance of proliferation prevention initiatives. “We must expand our work with Russia, Ukraine, and the other former Soviet nations to safeguard nuclear materials and

¹⁴ Senator Richard G. Lugar addresses the Newly Independent States Nonproliferation Conference at the Center for Nonproliferation Studies, Monterey Institute of International Studies, 11-13 December 1999, “Nunn-Lugar: The Past as a Guide to the Future,” in “Assessing U.S. Dismantlement and Nonproliferation Assistance Programs in the Newly Independent States,” *CNS Project: NISNP Conference*. Available Online: <http://www.cns.miis.edu/cns/projects/nisnp/ctrconf/spch03.htm>

¹⁵ William Perry, “Managing Danger: Prevent, Deter, Defeat,” Introduction to the “Annual Report to the President and the Congress,” *Defense Viewpoint*, Vol. 11, No. 13, 4 March 1996. Available Online: <http://www.defenselink.mil/speeches/1996/di1113.html>
Also see John Shields and William C. Potter, eds., *Dismantling the Cold War: U.S. and NIS Perspectives on the Nunn-Lugar Cooperative Threat Reduction Program* (Cambridge: The MIT Press, 1997), p.25.

technology so they never fall into the wrong hands.”¹⁶ The school of Unconditional Supporters unequivocally endorsed the President’s statement and his FY 2000 budget proposal, which provided an additional \$4.2 billion for the CTR program over a five-year period, as testimony to the CTR program’s value and its contributions to U.S. national security. President Clinton’s \$895 million CTR budget request for FY 2001 boosts the resources for existing nonproliferation efforts with nearly a ten percent increase over the previous year.¹⁷

The school of Unconditional Supporters is comprised of key U.S. civilian and military officials who fully endorse the program as one of the most effective and economical means of protecting the security interests of the United States and its allies. They describe the CTR program as a unique opportunity to work cooperatively with former adversaries toward a common security goal. While the Unconditional Supporters provide the most stalwart and consistent support for the program, their blanket endorsement fails to persuade some observers for various reasons. To begin with, government officials obviously have little latitude to criticize a program they are responsible for implementing, or to discuss its limitations.

Moreover, from the perspective of observers in other schools of thought, Unconditional Supporters typically overstate the CTR’s contributions to nonproliferation. While champions of the other schools of thought also emphasize

¹⁶ Clinton quoted in Edward Goldstein, “Avoiding Armageddon,” *Government Executive*, Vol. 31, No. 6, June 1999, p. 39.

¹⁷ William Hoehn, “The Clinton Administration’s Fiscal Year 2001 Budget Requests for Nuclear Security Cooperation With Russia,” 13 March 2000. Available Online: <http://www.rinceton.edu/~rnasac/congress/FY01-budget.html>

particular aspects of the program, the Unconditional Supporters have been criticized for presenting misleading or distorted information. For example, one common misperception, influenced by official descriptions of the program, is that the CTR initiative is fully responsible for the decisions by Ukraine, Belarus and Kazakhstan to abandon their nuclear weapons capabilities. While the CTR program undoubtedly provided a strong financial incentive to denuclearize, CTR was only one element in the long process of delicate diplomacy pursued by U.S., British, and Russian officials, among others.

Another common misperception is that the CTR program is fully responsible for Russia's ability to comply with START I and II requirements. This assessment is overstated and misleading. In the non-Russian republics, START compliance can be largely attributed to the CTR program. However, in Russia, the CTR program has probably at best only accelerated the pace at which strategic nuclear delivery systems have been dismantled.

According to the General Accounting Office (GAO), Department of Defense officials made comments during a 1995 GAO review which misrepresented and exaggerated the contributions of the CTR program. DoD officials presented misleading information, the GAO concluded, in that they attributed sole credit to the CTR program for progress in weapons elimination. Statements by DoD officials implied that every nuclear missile and warhead deactivated since the collapse of the Soviet Union could be

attributed to the CTR program.¹⁸ One DoD official indicated that “Missiles containing 2,825 warheads have been deactivated since the Soviet collapse” in 1991, but did not indicate how many of these were deactivated through the direct use of CTR assistance, which first began arriving in mid-1993.¹⁹ According to another DoD statement, “Approximately 630 strategic launchers and bombers have been eliminated since the Soviet collapse.” By 1994, however, Russia had eliminated more than 400 strategic launchers and bombers before receiving any CTR assistance for delivery vehicle elimination.²⁰ The GAO investigation concluded that the DoD was unable to determine the specific impact of CTR assistance – that is, in terms of the number of delivery systems and warheads dismantled with CTR support.²¹

B. PROGRAM ADVOCATES

The second school of thought consists of the Program Advocates. While members of this camp are strongly committed to the success of the CTR program, they also acknowledge its shortfalls and the obstacles (primarily bureaucratic resistance and political vulnerability in both the United States and recipient countries) that the program must work around and within. Program Advocates readily admit that the CTR program cannot eliminate the threat entirely and that, like all programs, it has limitations. Even on a conceptual basis, the CTR program entails constraints. While the program is based

¹⁸ U.S. General Accounting Office, *Weapons of Mass Destruction: Reducing the Threat From the Former Soviet Union: An Update*, Letter Report, September 1995. GAO/NSIAD-95-165.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

on cooperative efforts, U.S. activities are limited by constraints defined by the Russian government.

The basic philosophy of Program Advocates can be summed up as follows: "Achieving success in this arena may be difficult, but failing to act may carry even greater risks."²² Program Advocates acknowledge that a program of this nature and magnitude will undergo substantial changes, especially during its infant years. They are also aware of the damage, in terms of congressional support, which effective and cogent criticism can cause. This school therefore seeks to identify and eliminate the problems without terminating useful CTR programs.

Their first effort to sustain the program came with less than two years of CTR experience. The initial phase of the CTR program involved developing agreements between the United States and the former Soviet republics. The process was slow and CTR assistance showed few signs of reducing the proliferation threat. In late 1994, skeptics began to question the benefits of the program and particularly the appropriateness of using the U.S. defense budget for a program of this nature. In an effort to preserve the program and regain congressional support, Deputy Secretary of Defense John Deutch restructured the program and made the U.S. Departments of Energy and State executive agents for non-weapons and non-dismantlement programs.

Program Advocates acknowledge that the program's funding is not inexhaustible and that many U.S. initiatives, such as those which employ former Soviet scientists and

²² David Mosher and Geoffrey Forden, "Cooperative Approaches to Halt Russian Nuclear Proliferation and Improve the Openness of Nuclear Disarmament," U.S. Congressional Budget Office, National Security Division, May 1999. Available Online: <http://www.cbo.gov/showdoc.cfm>

weapons designers, are only intended to “jump-start” the denuclearization process in Russia and the other nuclear successor states. They support the employment of former Soviet scientists in peaceful nonmilitary projects, but recognize that the CTR program must begin a transition process with recipient countries that enables these scientists to be weaned from dependence on CTR assistance without regenerating unemployment and thereby increasing the threat that WMD expertise will proliferate to terrorists and rogue states.²³

Program Advocates point out that as the CTR program matures it will face many new challenges and uncertainties. They recommend that each CTR effort be judged on its individual merits instead of eliminating the entire CTR program because of specific deficiencies. For example, a 1999 GAO report reviewed the Initiative for Proliferation Prevention (IPP) program, a CTR initiative designed to reduce the risks posed by Russia’s unemployed weapons scientists. The GAO report indicated that some scientists currently receiving CTR assistance were still working in Russia’s WMD program.²⁴ It also indicated that U.S. officials did not know how many scientists were receiving CTR program funds and that they were not certain that CTR assistance was being provided to the appropriate individuals or institutions.²⁵ Senator Joseph Biden responded to these findings as follows: “It may well be that some projects involve aid recipients who are not

²³ U.S. General Accounting Office, *Nonproliferation: Concerns With DOE’s Efforts to Reduce the Risks Posed by Russia’s Unemployed Weapons Scientists*, Report to the U.S. Senate, Committee on Foreign Relations, February 1999. GAO/RCED-99-54.

²⁴ Ibid.

²⁵ Ibid.

really the ‘at risk’ experts whom the IPP intends to assist.”²⁶ In contrast, one might consider the reply of an Unconditional Supporter. Ashton B. Carter, Assistant Secretary of Defense for International Security Policy, responded to findings about the CTR program’s mismanagement of funds as follows: “While isolated instances of diversion or misuse may arise in a program of this size and scope, we [U.S. DoD] are confident to date that CTR assistance is serving the purpose we intended.”²⁷

Despite the program’s shortfalls, Program Advocates consider it a strong source of political leverage for the United States. Kenneth Luongo, a former senior advisor to the Secretary of Energy for Non-Proliferation Policy and a strong advocate of the program, suggests that CTR leverage can be used to provide mutual benefits for the United States and recipient countries and improve the efficiency of the program.

Luongo deems the United States agreement to purchase highly enriched uranium from Russia over a 20-year period an excellent opportunity. Luongo suggests that conditional requirements should dictate how some of the funds are spent. For example, a substantial portion of the income from U.S. purchases could be used to pay nuclear security guards and finance other security improvements.²⁸ Even on a more basic level, Matthew Bunn

²⁶ Joseph Biden, “Maintaining the Proliferation Fight in the Former Soviet Union,” *Arms Control Today*, Vol. 29, No. 2, March 1999, p. 20-25.

²⁷ Ashton B. Carter, quoted in “Response from the Department of Defense [response to Michael Waller’s ‘To Russia, With Cash’ article],” *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, Winter 1997, p. 144.

²⁸ Kenneth N. Luongo and Matthew Bunn, “Preempting a Russian Nuclear Meltdown,” *Global Beat* Issue Brief, No. 45, 5 December 1998.
Available Online: <http://www.nyu.edu/globalbeat/pubs/ib45.html>

has suggested, conditional requirements could stipulate that funds be used to pay electrical bills so security systems installed by the CTR program can operate.²⁹

While Program Advocates emphasize the many benefits which the CTR program provides, they consider the majority of criticism unwarranted and dismiss it as resulting from an incomplete or inaccurate understanding of the program. For example, some critics have argued that the CTR program requires or at least strongly prefers to utilize U.S. firms in its contracting practices, and that this practice creates resentment among foreign counterparts and may result in a higher cost for CTR equipment and materials.³⁰ Program Advocates, however, contend that this criticism is misplaced and a result of erroneous information or a misinterpretation of CTR policies. According to Program Advocates, CTR contracting practices strictly follow U.S. federal procurement laws which forbid preferential treatment and allow any country, American or foreign, to bid on a CTR contract.³¹

Program Advocates also suggest that criticism is often linked to residual Cold War attitudes. Representative Ellen Tauscher (Democrat-California) has asserted that some Members of Congress are reluctant to abandon their reservations about working with the Russians. "Some of my colleagues don't like the idea that the Cold War is over. They were very comfortable with the idea that we [Americans] hated the Russians."³²

²⁹ Matthew Bunn, "Loose Nukes Fears: Anecdotes of the Current Crisis" *Global Beat*, No. 45, 5 December 1998. Available Online: <http://www.nyu.edu/globalbeat/pubs/ib45.html>

³⁰ Charles Flickner, "The Russian Aid Mess," *The National Interest*, No. 38, Winter 1994/95, p. 17

³¹ Richard S. Soll, "Misconceptions About the Cooperative Threat Reduction Program," *Director's Series on Proliferation*, No. 8, Lawrence Livermore National Laboratory, 1 June 1995, p.40

³² Ellen Tauscher quoted in "The Nuclear Cities Initiative and Winning the Post-Cold War," *Global Beat*, Carnegie Endowment for International Peace Non-Proliferation Program, Project Proliferation Brief, Vol.2, No. 16, 4 October 1999. Available Online: <http://wwwnyu.edu/globalbeat/nuclear/CEIP100499.html>

She has also implied that without a clearly threatening enemy, there is little congressional incentive to finance a strong defense: “How do you build up a strong defense if you don’t have an enemy?”³³

C. STRONG CRITICS

This school of thought falls on the opposite side of the fulcrum in its interpretation of the CTR program’s contributions to U.S. national security. The Strong Critics consistently question the level of benefits that the United States gains from supporting the CTR program. Strong Critics of the CTR are skeptical about committing funds to any program that seems primarily to benefit Russia. Strong Critics are concerned about the commitment of CTR resources to areas beyond the initial WMD focus of the program. In their view, the CTR program is being used as a “catch-all” to address problems that are clearly beyond the realm of the congressional mandate, and the program’s capacity to accomplish its basic goals has thereby been diminished. This school holds that the CTR program has failed because of attempts to expand the CTR’s focus beyond the former Soviet WMD arsenal. For Strong Critics, “mission creep” and “slippery slopes” threaten to kill the CTR program.³⁴

Strong Critics oppose attempts to increase the flexibility of the CTR legislation and thereby allow programs to extend beyond the WMD realm. This issue has arisen in some cases because of genuine problems in the former Soviet Union. Senator Lugar has noted, for example, that the CTR program could benefit from gaining “the flexibility to

³³ Ibid.

³⁴ Jason Ellis, “Nunn-Lugar’s Midlife Crisis,” *Survival*, Spring 1997, p. 100. Also see John W.R. Lepingwell and Nikolai Sokov, “Strategic Offensive Arms Elimination and Weapons Protection, Control and Accounting,” *The Nonproliferation Review*, Vol. 7, No. 1, Spring 2000, p. 70.

focus our [United States] efforts on the destruction of weapons that could threaten our vital interests regardless of their strategic or non-strategic classification.”³⁵ Lugar has cited, for example, the backlog of Russian “general purpose” nuclear-powered submarines whose dismantlement is not funded under the current CTR legislation.³⁶

In 1999 Russian officials estimated that in the year 2000, approximately 100 nuclear-propelled, non-strategic submarines will be awaiting dismantlement.³⁷ Russian officials requested that CTR assistance be expanded to this area; however, they cavedated their request by emphasizing that the dismantlement of newer strategic ballistic missile submarines (SSBNs), which are eligible for funding by the CTR program, could not be authorized prior to that of attack submarines and other early-generation vessels, regardless of the CTR protocol.³⁸ CTR critics have called this cavedated request “nuclear blackmail.” According to CTR critics, Russia is using an extortion tactic, which plays on American fears of nuclear proliferation, to gain financial assistance for tasks that are not covered by CTR support. Tactics such as these, according to CTR critics, only serve to perpetuate Cold War suspicions and to discourage the United States and other nations from supporting CTR-like programs.³⁹

³⁵ Lugar, “Assessing U.S. Dismantlement and Nonproliferation Assistance Programs in the Newly Independent States, Commentary on Nunn-Lugar: The Past as a Guide to the Future,” Newly Independent States Nonproliferation Conference, 13 December 1999, Center for Nonproliferation Studies, Monterey Institute of International Studies. Available Online: <http://www.cns.miis.edu/cns/projects/nisnp/ctrconf/spch03.htm>

³⁶ *Ibid.*

³⁷ Igor Kudrik, “International Cooperation on Radiation Safety in the Russian Navy,” *The Nuclear Chronicle*, Bellona, 28 February 1999. <http://www.bellona.no>

³⁸ *Ibid.*

³⁹ Michael Mcfaul, “Getting Russia Right,” *Foreign Policy*, Vol. 117, Winter 1999, p. 2. See Also Richard Kelly, “The Nunn-Lugar Act: A Wasteful and Dangerous Illusion,” *Cato Foreign Policy Briefing*, Briefing No. 39, 18 March 1996. pp. 1-15. Available Online: <http://www.cato.org/pubs/fpbrieft/fpb-039.html>

In addition to Russia's "caveated request" for the United States to finance the dismantlement of obsolete, non-strategic submarines, Moscow has made a number of other decisions which have also been perceived as containing an undertone of blackmail. Critics contend that Russia is playing a game of nuclear "blackmail" in which Moscow demands U.S. concessions in exchange for arms control agreements.⁴⁰ An example involves the United States decision to help Russia finance the Mayak fissile material storage facility. According to published reports, the United States agreed to jointly fund the Mayak facility with the understanding that all fissile materials extracted from warheads would be consolidated at this facility.⁴¹ This agreement initially appeared to establish optimal conditions for U.S. efforts to monitor and account for fissile materials in Russia.

However, Viktor Mikhailov, the head of the Russian Federation's Ministry of Atomic Energy (MINATOM), indicated that Russia intended to maintain multiple storage sites and that the United States would only have access to the facilities which it funded. "Plutonium from dismantled warheads might be stored at several different places and the United States would only have access to the sites for which it pays...the United States will have to increase its assistance to Russia if it wants access to all of them."⁴² While it is unclear whether these comments actually reflect Russian policy, the statement implies that Russia is using its nuclear assets as leverage to obtain additional CTR funds from the

⁴⁰ Michael Mcfaul, "Getting Russia Right," *Foreign Policy*, Vol. 117, Winter 1999, p. 2. Also see Kelley, "The Nunn-Lugar Act: A Wasteful and Dangerous Illusion," p. 7.

⁴¹ "Former Soviet Republics Clear Way for Nunn-Lugar Monies," *Arms Control Today*, Vol. 24, No. 1, January 1994, pp. 28-29.

⁴² Viktor Mikhailov quoted in "Former Soviet Republics Clear Way for Nunn-Lugar Monies," *Arms Control Today*, Vol. 24, No. 1, January 1994, pp. 28-29.

United States. A 1999 GAO report confirmed Russia's reluctance to reserve the Mayak facility for plutonium extracted from dismantled warheads.⁴³

The U.S. agreement to help Russia fund the Mayak fissile material storage facility is further shaded by Russia's funding shortfalls – another criticism of the CTR program which consistently surfaces in this school of thought. For the United States, the Mayak facility agreement has been plagued by cost overruns. The U.S. financial investment in the project has more than doubled beyond the initial estimated amount and it is expected to increase substantially by the time the facility is completed.⁴⁴ In addition, agreements with Russia for a U.S. role in fissile material oversight have yet to be concluded.

In 1996 the United States and Russia each agreed to fund half, approximately \$275 million, for the design and construction of the Mayak facility.⁴⁵ The Russians, however, have consistently defaulted on their share of the payments. If the United States decided to proceed with the facility's construction, the costs could increase to more than one billion dollars. In 1998 Russia indicated that it also lacked the resources needed to package and transport the fissile material to the Mayak storage site; paying for these tasks could cost the United States an additional \$650 million.⁴⁶ Russia has also attempted to obtain additional funds for other Mayak-related facilities, including a car wash, a garage, a bus station and a heating plant that U.S. officials consider overly large and non-essential. Some Americans are also concerned about Russia's inability to pay

⁴³ U.S. General Accounting Office, *Weapons of Mass Destruction: Effort to Reduce Russian Arsenal May Cost More, Achieve Less Than Planned*, Letter Report, 13 April 1999. GAO/NSIAD-99-76.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

the operational costs once the Mayak facility is completed. Russian officials estimate that it will cost nearly \$80 million annually to operate the facility; the United States estimates are substantially lower – \$12 to \$13 million.⁴⁷

While the rising cost of the CTR program is a major area of criticism, the majority of opposition from the Strong Critics focuses on initiatives that do not appear to directly carry forward the nuclear weapons reduction process. Projects such as defense conversion efforts and housing for retired Strategic Rocket Force (SRF) officers are projects that do not appear to address core problems. Richard Kelly, an independent defense analyst, has described the CTR program as a “wasteful and dangerous illusion,” and has declared that there is no evidence that providing housing for former military officers will prevent WMD proliferation.⁴⁸

In addition to the housing programs, defense conversion is another area of CTR assistance that remains hotly debated in Congress. According to critics such as Michael Waller, defense conversion projects more closely resemble foreign aid than defense-related programs. Critics refer to these non-weapons projects as “mission creep” because they continue to broaden the scope of the CTR program. Critics hold that some projects no longer support core objectives.⁴⁹

Defense conversion projects have failed to demonstrate that they help to prevent WMD proliferation. Furthermore, they consume resources that should be directed to

⁴⁷ Ibid.

⁴⁸ Richard Kelly, “The Nunn-Lugar Act: A Wasteful and Dangerous Illusion,” *Cato Foreign Policy Briefing*, No. 39, 18 March 1996. Available Online: <http://www.cato.org/pubs/fpb-039.html>

⁴⁹ Michael Waller, “Loving the Russian Bomb,” *Insight*, 6 December 1999. Available Online: <http://www.ebird.dtic.mil/Dec1999/s199991208loving.htm>

legitimate defense purposes. These arguments are substantiated in a 1997 GAO report on an investigation of 24 defense conversion projects. While these projects consumed \$143 million of the \$179.7 million allocated, the GAO was unable to confirm that defense conversion had any direct impact on eliminating WMD or other military production capacity in the former Soviet Union.⁵⁰

Specifically, the GAO found that most efforts were focused on converting dormant facilities instead of active production lines. The GAO report indicated that only one of the 24 projects reviewed intended to convert a facility that was actively involved in WMD production.⁵¹ Furthermore, at least one-third of the projects employed people who were no longer actively involved in WMD production. In Ukraine and Belarus, a defense conversion project receiving U.S. funds to build housing for retired SRF officers involved several firms which had no connection to the weapons industry.⁵²

Reports about a 1994 defense conversion project suggest that the inadequacies associated with the program have stirred Russian resentment and may have impaired U.S.-Russian relations. One of the initial U.S. defense conversion efforts earmarked \$20 million in seed money for U.S. companies proposing civilian ventures with Russian WMD manufacturers. As part of this program, one of Russia's most prestigious military design bureaus was awarded a contract with a Tennessee-based cola company. The DoD's selection of a low-tech bidder as a partner for one of Russia's most technically advanced companies irritated many Russian officials, who saw the project not as

⁵⁰ U.S. General Accounting Office, "Cooperative Threat Reduction: Status of Defense Conversion Efforts in the Former Soviet Union," Letter Report, April 1997. GAO/NSIAD-97-101.

⁵¹ Ibid.

⁵² Ibid.

mutually beneficial, but as a U.S. effort to emasculate Russia's military and industrial strength. One of the industry's top-level managers indicated that he saw a "conspiracy at work...Americans are trying to stop Russia from developing advanced technology."⁵³ In addition, the conversion project was expected to employ approximately 50 of the company's 6,000 workers – failing to meet one of the primary U.S. CTR goals of finding non-WMD employment for large numbers of Russian WMD workers.⁵⁴

D. COMPLETE ADVERSARIES

The school of Complete Adversaries is grounded in strict opposition to the CTR program. It does not advocate any type of U.S.-sponsored denuclearization campaign in Russia and other former Soviet republics. This school deems the CTR program a "policy divorced from reality" and maintains that the CTR program will ultimately threaten, rather than enhance, U.S. national security.⁵⁵ This school contends that the CTR is not the appropriate mechanism to reduce the WMD proliferation threat from the former Soviet Union. Complete Adversaries of the CTR encourage the United States to find a new approach that would support political and economic reform in Russia and promote positive changes in Russia's international conduct. Until substantial improvements are made in these areas, critics maintain, the United States and other Western governments should refrain from assisting Russia.⁵⁶

⁵³ "U.S. Stirs Russian Resentment With Plans for Defense Conversion," *The Wall Street Journal*, 19 September 1994. Found on Proquest on 10 May 2000.

<http://proquest.umi.com/pqdweb?TS=970766...=1&Dtp=1&Did=000000004379219Mtd=1&Fmt=3>

⁵⁴ Ibid.

⁵⁵ Michael Waller, "Loving the Russian Bomb," *Insight*, 6 December 1999, p.10.

⁵⁶ Roger W. Robinson Jr., "Don't Bail Out a Belligerent Russia," *The Wall Street Journal*, 28 August 1998, p. A10.

This school is characterized by its outright dismissal of the CTR program. Complete Adversaries do not assess CTR projects according to their individual applications and contributions. Instead, the program is judged overall as an ineffective means of addressing the WMD proliferation dangers in the former USSR. Like the school of Unconditional Supporters, the blanket assessment of the Complete Adversaries lacks an ability to provide a nuanced perspective on the CTR program. Whereas the Unconditional Supporters are “blind” to the CTR’s shortcomings, Complete Adversaries are unwilling to acknowledge any successes which can be attributed to the CTR program.

The position taken by Complete Adversaries is grounded in several major criticisms of the CTR program. One of the primary criticisms of the CTR by this school of thought is that Russia’s nuclear stockpile has increased and that its strategic forces have been modernized at the expense of the U.S. taxpayers. “Far from helping reduce Moscow’s nuclear warhead stockpile, the Clinton Administration has actually expanded it by paying for warheads from Belarus, Kazakhstan and Ukraine that are transferred to Russia...[while Moscow] forges ahead with clandestine weapons development—helped by the United States.”⁵⁷ Michael Waller, executive editor of *Demokratizatsiya*, contends that U.S. defense dollars are being used to dismantle obsolete Soviet equipment, thereby reserving Russia’s defense budget for strategic modernization programs.⁵⁸ For example, in 1999, Russian naval officials indicated that the oldest Typhoon-class submarine (known as project 941, “Akula”), which had been under repairs at the Sevmash shipyard

⁵⁷ Waller, “To Russia With Cash,” *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, Winter 1997, p. 108.

⁵⁸ Waller, “Author’s Rebuttal to the Department of State [comments on Waller’s ‘To Russia With Cash’ Article],” *Demokratizatsiya*, p. 128.

in Severodvinsk for more than nine years, was expected to return to active service in 2001. This raised serious doubts as to whether the CTR program would be able to dismantle five of the six Typhoon submarines as it had originally planned. Since the oldest Typhoon-class submarine (first put into operation in 1981) will re-enter active service in 2001, it is highly unlikely that Russia will allow the United States to dismantle the newer Typhoon submarines commissioned in the late 1980s.⁵⁹

Even if Russia honors its commitment to dismantle the Typhoon-class submarines, it is unlikely that its strategic forces will be substantially reduced. As obsolete submarines are dismantled, Russia plans to replace them with an upgraded model. The Typhoon is scheduled to be replaced with the new strategic Borey-class submarine, a more advanced ballistic missile submarine. In this respect, CTR assistance may indirectly serve to accelerate Russia's strategic modernization program, because the CTR funds cover expenses that Russia would otherwise have to pay for itself. In 1996, the U.S. Secretary of Defense and other U.S. officials toured a Russian shipyard to witness the destruction of a Yankee-class submarine using CTR assistance. In the same shipyard, Russia's first Borey-class vessel was under construction.⁶⁰

Waller has characterized CTR efforts as "under-productive at best and often counterproductive."⁶¹ According to Waller, "U.S. aid has discouraged reform by abetting organized crime and official corruption...and money intended for dismantling the Soviet

⁵⁹ Igor Kudrik, "Delta-IV Put in Service, Typhoon to Join," *The Nuclear Chronicle*, 14 December 1999. Available Online: <http://www.bellona.no>

⁶⁰ Waller, "Loving the Russian Bomb," Available Online: <http://www.ebird.dtic.mil/Dec1999/s19991208loving.htm>

⁶¹ Waller, "To Russia, With Cash," *Demokratizatsiya*, p. 105.

nuclear stockpile is being frittered away while Russia rebuilds its arsenals.”⁶² In addition, corruption in both the government and the private sector in Russia has discouraged foreign investment, thereby harming efforts to promote democracy and a market economy. Reports by Transparency International, a Berlin-based “corruption watchdog” organization, have consistently ranked Russia among the world’s 10 most corrupt nations.⁶³ The organization uses information from surveys and polls concerning bribe-taking and other corrupt practices. Complete Adversaries of the CTR maintain that the program was unable to effectively operate under these conditions. Russia’s internal practices are cited as one of the principal factors which have caused the CTR program to fail. Former Senator Bill Bradley (Democrat, New Jersey) has added, “Not only do we [Americans] fail to influence the course of Russian reform, we actually create an anti-American backlash built on disappointed expectations.”⁶⁴

Complete Adversaries of the CTR program are typically criticized for their inability and reluctance to overcome the suspicions and mistrust of the Cold War period. Recent foreign policy initiatives of Russian President Vladimir Putin nonetheless appear to warrant U.S. caution. According to Nikolai Ryzhkov, a senior Russian energy official, Putin recently decided to relax restrictions on the export of Russian nuclear materials and technologies and to resume trade with countries not subject to full-scale international monitoring.⁶⁵ Over the past several years, reports have indicated that Russia has covertly

⁶² Ibid., p. 112.

⁶³ Jamestown Foundation, “Transparency International Puts Russia on Par With Kenya,” *The Monitor-A Daily Briefing of the Post-Soviet States*, Vol. 6, No. 171, 15 September 2000.

⁶⁴ Senator Bill Bradley quoted in Michael Waller, “To Russia, With Cash,” *Demokratizatsiya*, p. 142.

⁶⁵ Jamestown Foundation, “Russia Goes it Alone to Expand Sale of Nuclear Technologies,” *The Monitor*, Vol. VI, No. 108, 2 June 2000.

transferred missile technology and other materials to Iran and other rogue nations. Allegations also indicate that Russian specialists have actively aided Iran in its missile development program. In 1998 the Russian government launched an investigation of nine companies suspected of violating Russian export laws. Russian companies were accused of illegally exporting dual-use technologies connected with WMD production and missile delivery systems. The transactions under investigation involved Iran, North Korea and Libya.⁶⁶ The United States responded by applying trade sanctions against several of the companies.

Critics hold that President Putin's unilateral break with international nonproliferation efforts and consistent engagement with destabilizing behavior contrary to U.S. interests indicate that Russia lacks the dedication and commitment to develop an enduring nonproliferation culture. According to the Jamestown Foundation, arms control experts in the West "have characterized the Putin decree as a unilateral break with international nonproliferation efforts and as a sign of the Kremlin's disregard for a recent pledge by the nuclear powers to work toward the full elimination of nuclear weapons."⁶⁷ Complete Adversaries of the CTR hold that, without a joint commitment and active participation by both the United States and Russia, CTR efforts can do little to curb WMD proliferation. In light of Russia's recent foreign policy decisions, Complete Adversaries of the CTR urge Congress to immediately terminate CTR-funded initiatives

⁶⁶ "Institutions Suspected by the Russian Government of Violating Export Control Legislation," *The Moscow Summit*, Center for Nonproliferation Studies, Monterey Institute of International Studies. Available Online: <http://cns.miis.edu/research/summit/9firms.htm>

⁶⁷ Jamestown Foundation, "Russia Goes it Alone to Expand Sale of Nuclear Technologies," *The Monitor*, Vol. VI, No. 108, 2 June 2000.

in order to limit both U.S. financial losses and the potential for unintended, dangerous consequences.⁶⁸

⁶⁸ Kelly, "The Nunn-Lugar Act: A Wasteful and Dangerous Illusion." Available Online: <http://www.cato.org/pubs/fpbriefs/fpb-039.html>

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III. KEY ISSUES OF DISCORD

Several aspects of the CTR program have remained consistent points of contention among the four schools of thought. Most of the disagreements involve programs which are supported through CTR funds, yet limit oversight opportunities for U.S. officials. The scope of the CTR program, which has expanded to include projects that do not directly concern weapons dismantlement, is also an issue of significant controversy. This chapter examines four key issues associated with the CTR program: the transfer of strategic nuclear warheads from the non-Russian nuclear successor states (Belarus, Kazakhstan, and Ukraine) to Russia; the lack of transparency in Russia's fissile material operations and warhead dismantlement program; the decentralization of CTR responsibilities to U.S. federal agencies, including the Departments of Defense, Energy, and State, among others; and the expansion of CTR programs beyond the realm of WMD dismantlement, safety and security.

A. REMNANTS OF THE SOVIET UNION: FOUR NUCLEAR SUCCESSOR STATES

The first key issue to be investigated is the role that the CTR program played (or the extent to which it was a factor) in the transfer of nuclear warheads to Russia from the three non-Russian nuclear successor states – Belarus, Kazakhstan and Ukraine. A central argument among the four schools of thought focuses on Russia, which became the sole possessor of the Soviet Union's strategic nuclear arsenal.

When the Soviet Union broke apart in December 1991, the United States faced the possibility that four independent nuclear weapons states might be formed. There was

also the question of which state or states, under international law, would succeed the Soviet Union in international rights and responsibilities. For START purposes, Washington was concerned about which state or states would have international legal responsibility for the Soviet strategic nuclear arsenal. It was determined by the United States that all four successor states with strategic nuclear weapons on their territories would have to become signatories to the START agreement.

The Bush Administration quickly realized that Russia and the United States would prefer that there be simply one nuclear successor state to the Soviet Union.⁶⁹ U.S. officials noted that monitoring four nuclear states would be more difficult and costly than monitoring one. Four nuclear weapons states would also complicate the process of controlling nuclear proliferation in the region. Their cash-strapped economies increased the potential that these states might sell nuclear weapons, materials, and/or technology to proliferant states. Kazakhstan's relationship with the Islamic nations was also an issue of concern. Rumors had surfaced indicating that Kazakhstan had sold tactical nuclear warheads to Iran. Although Kazakh officials denied the allegations, it was not until all nuclear warheads had been transferred to Russia that Russian officials could dispel the reports of "loose nukes."⁷⁰

European stability was also an issue of concern. Congressional leaders feared that the creation of four nuclear successor states would aggravate the region's fragile stability.

⁶⁹Graham T. Allison, Owen R. Cote Jr., Richard A. Falkenrath, and Steven E. Miller, "Avoiding Nuclear Anarchy," *The Washington Quarterly*, Vol. 20, No. 3, Summer 1997, p. 185.

⁷⁰Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Washington D.C.: The Woodrow Wilson Center Press, 1995), p. 143.

The presence of nuclear weapons in three non-Russian republics only served to undermine their security in several respects. First, nuclear weapons in the possession of the non-Russian republics were essentially useless as a deterrent against Russian or other foreign aggression. The non-Russian republics did not have independent command and control mechanisms, which meant that they could not conduct an independent launch. There was also the possibility that Russia would use force against those who refused to relinquish the nuclear weapons on their territories. For countries such as Kazakhstan which share a border with China, the possession of nuclear weapons could be interpreted as a threatening gesture. Most of the newly independent states did not have the autonomous military capability to withstand an attack, and the United States had indicated that it would not provide security assurances to countries that chose to exist as independent nuclear weapons states.

The security of the non-Russian states retaining nuclear weapons could also be threatened in the event of a conflict between Russia and NATO. A territory containing former Soviet strategic nuclear weapons could appear threatening and become a potential target. For Belarus, the consequences of possessing former Soviet nuclear weapons during a European conflict appeared even more devastating. Soviet war plans had identified Belarus as the likely avenue for an advance from the West.⁷¹ If Belarus officials believed what Soviet propaganda had repeated for decades about NATO's plans to attack its neighbors to the East, they might have also believed that Russia would likely execute the Soviet plans which called for the explosion of nuclear weapons on Belarusian

⁷¹ Ibid., p. 130.

territory as the primary method of halting the attack.

Belarus, Kazakhstan, and Ukraine also lacked the financial and technical means of assuming the status of an independent nuclear weapons state. Since Russia contained the bulk of the USSR's nuclear weapons and fissile materials and had the infrastructure to maintain and safeguard the weapons, the U.S. Administration was all the more inclined to accept Russia's claim to be the natural heir and rightful owner of the nuclear weapons. The United States agreed to help Russia transfer the weapons from the non-Russian republics with the understanding that these warheads would be dismantled and the fissile materials would not be reused in new nuclear warheads.

Most people in the non-Russian republics were also anxious to rid themselves of the nuclear "stigma." The years of nuclear development and testing under Soviet rule had created a strong anti-nuclear sentiment. Many people still suffered from the effects of the Chernobyl disaster and the Soviet Union's nuclear testing in Kazakhstan. There was also concern about the safety of the nuclear arsenal. Much of the stockpile was reaching the limits of its service life. Some people feared that if the condition of the warheads became too unstable, Russia would refuse to accept them.

While the three non-Russian republics were committed to becoming nuclear-weapons-free states, they also shared similar concerns about their newly acquired independence. Ukraine and Kazakhstan in particular were concerned about the consequences that returning the nuclear weapons might have on their state sovereignty and security. Ukraine and Kazakhstan wanted a number of agreements with Russia, including recognition of their independence and existing borders, before they would

agree to transfer the nuclear weapons. Without the deterrent benefit of nuclear weapons, Ukraine also wanted implicit security guarantees that nuclear weapons would never be used against it and assurances from the United States that it would be protected if threatened by a foreign adversary.

Critics did not oppose the consolidation of strategic nuclear warheads, but objected to using U.S. funds to support an increase in Russian nuclear capabilities. Michael Waller, for example, argued that the U.S. defense budget was being used to assist in the transfer process, thereby obliging the U.S. taxpayer to increase Russia's strategic nuclear arsenal.⁷² In addition, Russia was to acquire a net gain in its nuclear arsenal because Ukraine and Kazakhstan contained a number of nuclear delivery systems and accompanying warheads that were not required to be dismantled under START I conditions. If all the nuclear warheads were returned, Russia would acquire a net gain of strategic warheads that could theoretically be redeployed. For example, Ukraine housed approximately 130 SS-19 intercontinental ballistic missiles (ICBMs) that were expected, but not required to be eliminated under START I, along with approximately 46 SS-24 missiles that were relatively modern and therefore not included in the current disarmament plan.⁷³ In addition, only half of the 104 SS-18s deployed in Kazakhstan had to be eliminated under the START agreement.⁷⁴

⁷² Michael J. Waller, "To Russia With Cash," *Readers Digest*, June 1996 in *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, Winter 1997, p. 108.

⁷³ William C. Potter, *The Politics of Nuclear Renunciation: The Cases of Belarus, Kazakhstan, and Ukraine*, Occasional Paper No. 22 (Washington D.C.: The Henry L. Stimson Center, April 1995), p. 8.

⁷⁴ Reiss, *Bridled Ambition*, p. 146.

Those who opposed the transfer, such as Michael Waller, also maintained that there were flaws in the Clinton Administration's regional security assessment as it related to the nuclear weapons.⁷⁵ Richard Morningstar, special advisor to the President and the Secretary of State on assistance to the new independent states at the Department of State, had maintained that the existence of four nuclear successor states could threaten U.S. security and that the transfer of warheads to Russia would eliminate the threats from three of these states. However, Morningstar acknowledged that none of the three non-Russian republics had the capability or the desire to be an independent nuclear power. According to Morningstar, "The command and control systems in Belarus, Kazakhstan and Ukraine were incomplete, at best, without Russian participation."⁷⁶ Therefore, in their existing state, the nuclear arsenals located on the territory of the three non-Russian republics did not present a strategic missile threat to the United States or any other country.

Waller has argued, however, that instead of supporting the transfer of the warheads to Russia, the United States should have investigated other options. For example, at one point Ukrainian officials wanted to dismantle nuclear warheads on Ukrainian territory in cooperation with the United States.⁷⁷ Critics insist that other options, including the one exercised in Project Sapphire – that is, the direct purchase of

⁷⁵ Waller, "To Russia, With Cash," p. 108.

⁷⁶ Richard Morningstar, "Response from the Department of State [response to Waller's 'To Russia, With Cash' Article]," *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, Winter 1997, p. 112.

⁷⁷ Waller, "Author's Rebuttal to the Department of State[response to his article 'To Russia, With Cash'], " *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, Winter 1997, p. 130.

fissile materials from the non-Russian states – would have been more consistent with the U.S. goal of preventing nuclear proliferation.⁷⁸

Project Sapphire was the first of two cases reported in open sources, in which the CTR program was instrumental in the direct purchase of nuclear materials or delivery systems from former Soviet republics. In 1994, 600 kilograms of highly enriched uranium were transferred from Kazakhstan to the United States. In return for its cooperation, Kazakhstan received an undisclosed amount of U.S. financial assistance distributed through the CTR program.⁷⁹

The second case involved the U.S. purchase of 21 MiG-29 Fulcrum jets from the republic of Moldova. The fighter jets had a dual capability of carrying nuclear and/or conventional weapons. The United States decided to purchase the fighters after learning that Iran had inspected the jets and expressed an interest in purchasing them. The United States purchased the MiGs in November 1997 for an undisclosed amount. The MiGs were delivered to the National Air Intelligence Center at Wright-Patterson Air Force Base near Dayton, Ohio.⁸⁰

While Ukraine, Kazakhstan and Belarus were equally committed to becoming nuclear-weapons-free nations, the process of achieving this goal was significantly different for each state. The following section briefly reviews some of the principal

⁷⁸ William C. Potter, "The Post-Soviet Nuclear Proliferation Challenge," presented before the Senate Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Service found in *Federal News Service*, 5 June 1997. Also see Zachary Selden, "Nunn-Lugar: New Solutions for Today's Nuclear Threats," *Business Executives for National Security (BENS)*, Special Report, 16 September 2000, Available Online: <http://www.bens.org/pubs/nunnlugar.html>

⁷⁹ "Fact Sheet on Transfer of Nuclear Material from Kazakhstan," White House Fact Sheet, No. 368628, 23 November 1994. Available Online: <http://www.fas.org/news/kazakh/941123-368628.htm>.

⁸⁰ Pat McKenna, "A Real MiG Deal," *Airman*, Vol. 42, No. 5, May 1998, pp. 26-29.

factors which influenced the decision and the process of becoming a non-nuclear weapons state. While the U.S. CTR program played an important role in the removal of nuclear weapons from the three non-Russian republics, it was not the overriding factor in their decisions to relinquish the strategic nuclear weapons on their territories. CTR assistance was most instrumental in the case of Ukraine, which held out for larger monetary rewards before agreeing to transfer the weapons. All three non-Russian nuclear successor states, including Ukraine, signed the Lisbon Protocol in May 1992 and agreed to START I and the Nuclear Non-Proliferation Treaty long before implementation of the CTR program. Belarus, Kazakhstan and Ukraine agreed to renounce nuclear weapons completely in 1991, before Congress passed the CTR act in December of that year, and well before CTR implementation actually began in 1993.⁸¹ Despite the prospect of CTR assistance, the fear of international isolation, both political and economic, appears to have been the primary decision catalyst.⁸² For each of the non-Russian nuclear successor states, the economic, political and military costs of possession eventually proved too high.

1. Belarus

Belarus was the first nation that inherited nuclear weapons and the first to renounce them formally by ratifying the START I treaty and acceding to the Nonproliferation Treaty (NPT) as a non-nuclear-weapons state. For Belarus, status as a nuclear weapons state had been costly in all respects and Minsk welcomed the

⁸¹ Waller, “Loving the Russian Bomb,” p.10. Also see Kelly, “The Nunn-Lugar Act: A Wasteful and Dangerous Illusion,” p. 7.

⁸² Potter, *The Politics of Nuclear Renunciation*, p. vii.

opportunity to relinquish the nuclear weapons. Even without the promise of CTR or other financial assistance, the decision to become a nuclear-weapons-free state carried significant benefits for Belarus.

Belarus was one of the most heavily armed republics at the time of the collapse of the Soviet Union. In addition to over 1000 tactical nuclear weapons, Belarus was host to 81 single-warhead road-mobile SS-25 ballistic missiles and approximately 35,000 members of the Strategic Rocket Force, the majority of whom were ethnic Russians.⁸³

The concentration of weapons in Belarus was a function of its geography. Centrally located between Russia, Ukraine, Poland, Latvia and Lithuania, Soviet political ideology defined Belarus as the likely gateway for foreign aggression. According to Soviet ideology, which attributed hostile intentions to NATO, an advance by NATO on the Soviet Union was likely to come through Belarus. Soviet war plans designated Belarus as the forward line of defense, and indicated that an aggressive advance was to be halted by the release of tactical nuclear weapons on the territory of Belarus.⁸⁴ Therefore, in the eyes of key decision-makers in Minsk, the possession of nuclear weapons created an unwanted and potentially dangerous security liability. As a nuclear weapons state, they reasoned, Belarus was not only a potential target, but was also likely to be a nuclear battlefield in the event of a conflict between Russia and NATO.

Belarus did not contest Russia's decision to remove the nuclear weapons from its territory. While many factors influenced Minsk's decision, the promise of CTR

⁸³ Reiss, *Bridled Ambition*, p. 130.

⁸⁴ Testimony of Colonel General Anatoly Kostenko, Belarusian Military District Commander, before the Supreme Soviet, 15 November 1991, cited in Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Washington D.C.: The Woodrow Wilson Center Press, 1995), p. 130.

assistance was not a significant determinant. Living with the memories and long-term effects of the Chernobyl disaster, the Belarusian population had developed a strong aversion for anything nuclear and welcomed the opportunity to relinquish the weapons.

Russia's decision to take the nuclear weapons was also welcomed by the legislature and other political officials. A large majority of the Belarusian legislature consisted of members of the old communist party. From their perspective, Russia was the natural and rightful owner of the nuclear weapons and they felt obligated to support this decision. Mitchell Reiss has characterized their attitudes as follows: "If Moscow wanted the nuclear weapons back, then back they would go."⁸⁵ Those who had worked for Belarus' independence were equally anxious to have the nuclear weapons removed from its territory. To the nationalists, Belarus would not be truly independent until the Russian military presence was withdrawn – and when the nuclear weapons left, so would the soldiers.

Unlike Ukraine and Kazakhstan, Belarus was prepared to relinquish the nuclear weapons without any financial compensation from Russia for the fissile material. In addition, because of Minsk's strong economic dependence and political subservience to Russia, security guarantees from the West were not an immediate concern. By May 1992, Belarus had accepted the "side letters" requiring the non-Russian republics to transfer all strategic nuclear warheads to Russia and had signed the Lisbon Protocol that made the non-Russian republics parties to START and obligated them to join the NPT as non-nuclear-weapon states.

⁸⁵ Reiss, *Bridled Ambition*, p. 135.

Despite Minsk's support for the nuclear weapons removal operation, funding from the CTR program for dismantlement was slow to arrive, delaying the transfer of the weapons for almost a year. Another area of concern was the fate of the 35,000 SRF members who supported the nuclear arsenal. Many of the soldiers who remained in Belarus would need jobs, and the SRF officers, according to Russian law, could not be retired until they were provided with housing. By 1993, approximately \$40 million in CTR assistance had been approved for strategic weapons' dismantlement, defense conversion, and housing for retired SRF officers.⁸⁶

2. Ukraine

Ukraine's reluctance to freely relinquish possession of the strategic nuclear weapons set a significant precedent that would shape the future of CTR assistance and arms control agreements in general. By 1992, after diplomatic pressure and political isolation had failed to attain ratification of the START I treaty and the Lisbon Protocol by the Ukrainian parliament, it became clear to the United States that a nation's nuclear weapons policy could not be considered in isolation from its other national goals and priorities. For Ukraine, fortifying national independence and creating a viable economy were goals that were directly tied to the nuclear weapons issue.

While most Ukrainians supported the renunciation of nuclear weapons by Kiev, the weapons were seen as a means of deterring Russian aggression and preserving Ukraine's territorial integrity. The Ukrainian parliament (the Rada) insisted that Ukraine would part with its nuclear weapons inheritance only if it could obtain the security

⁸⁶ "Freeze in U.S. Aid Stalls Agreement to Eliminate Nuclear Weapons," *Belpan New Agency-Belarus*, provided by *BBC Worldwide Monitoring*, 23 October 1997.

guarantees of equivalent value through other means.⁸⁷ Ukrainian officials also used the nuclear weapons as leverage against Russia and the United States to obtain financial benefits. Officials insisted that Ukraine's economy needed financial assistance. They also wanted financial compensation for the fissile materials from both the strategic warheads and the tactical warheads which Russia had already removed.

While Ukraine continued to assert its goal of becoming a nuclear-weapons-free state, it also continued to manipulate the nuclear weapons issue in pursuit of other objectives. In November 1992, Ukrainian officials claimed ownership and administrative control over the nuclear arsenal. The United States administration feared that administrative control would eventually lead to operational control and an independent launch capability.

After a year of intense negotiations involving the United States, Ukraine and Russia, on 18 November 1993 the Rada conditionally ratified START I. Despite this milestone achievement, the conditions attached by the Rada eliminated the necessary agreements which would guarantee the complete removal of nuclear weapons from Ukraine and the formal implementation of the START agreement. For example, the conditions eliminated the Lisbon Protocol and the "side letters" which required Ukraine to become a non-nuclear-weapons state signatory to the Nonproliferation Treaty (NPT) and to relinquish all nuclear warheads to Russia. The conditions also reaffirmed Ukraine's ownership of the strategic weapons and obligated Russia to provide financial compensation for both the tactical and strategic warheads.

⁸⁷ Reiss, *Bridled Ambition*, p. 102.

The United States responded by developing the Trilateral Agreement among the United States, Ukraine and Russia. The agreement addressed Ukraine's long-standing security concerns, financial compensation issues, and the need for a strong economic aid package. The Trilateral Agreement satisfied the conditional requirements initially applied to the START agreement, and in February 1994, the Rada removed the stipulations and ratified the START I agreement in its original form.

The final hurdle in Ukraine's process of renouncing nuclear weapons – ratification of the NPT – was achieved in November 1994 under the leadership of the new Ukrainian President, Leonid Kuchma. Dedicated to developing a strong market-based economy, Kuchma was convinced that membership in the NPT would lead to the necessary political and economic integration with the Western nations. Leverage was again asserted by the Rada for additional security assurances from the West and a larger financial package from the United States. By November 1994 it was clear to Ukrainian officials that the benefits of transferring the strategic nuclear weapons clearly outweighed any advantage to retaining them. Initial agreements included American, Russian and British security assurances, 100 tons of non-weapons-grade uranium for Ukraine's nuclear reactors, cancellation of the multi-billion dollar oil and gas debt to Russia, and a \$900 million dollar pledge in CTR assistance and other financial aid from the United States.⁸⁸

⁸⁸ Ibid., p. 120-121.

3. Kazakhstan

Kazakhstan's declaration of independence expressed a strong anti-nuclear sentiment and implicitly prohibited nuclear testing on its territory. Under Soviet rule, the Kazakh people were subjected to more than 50 years of nuclear testing at the Semipalatinsk nuclear testing site in the northeastern section of the country. Both the population and the environment still suffered from the long-term effects of radiation exposure. In addition to the testing site, Kazakhstan was also host to over one hundred SS-18 ICBMs, each equipped to carry ten nuclear warheads, and a fleet of 40 nuclear-capable "Bear-H" long-range bombers.

Kazakhstan was the last of the non-Russian republics to declare its independence. President Nazarbayev and the other Kazakh political leaders had given little thought to the nuclear weapons issue before the collapse of the Soviet Union; and therefore they were reluctant to see the Soviet Union's structures, including the integrated armed forces, unravel. Unlike Ukraine, Kazakhstan did not attempt to assert local control of the strategic nuclear arsenal on its territory. Instead, the Kazakh leaders adopted a middle-of-the-road approach to their nuclear policy and were ambiguous about their intentions to relinquish the nuclear weapons to Russia. While committed to Kazakhstan's becoming a non-nuclear state, they understood that by stalling, as Ukraine had done, they could gain a corresponding amount of leverage and thereby extract greater rewards from the West in exchange for giving up the nuclear weapons. Their policy was essentially to postpone the removal of the nuclear weapons for maximum benefit.

It is unlikely that the Kazakh leaders ever seriously considered the possibility of maintaining an independent nuclear force. They did, however, consider the potential utility of nuclear weapons for deterrent purposes toward China, which they regarded as a significant military threat. Their strategic concerns prompted them to seek a nuclear deterrent in the form of security assurances under the Russian nuclear umbrella.

The attractiveness and value of nuclear weapons for Kazakhstan was offset by the leadership's perception that the retention of nuclear weapons would increase Kazakhstan's diplomatic isolation and deprive it of benefits it might otherwise obtain. U.S. Secretary of State James Baker was highly influential in Kazakhstan's reassessment of its nuclear posture and its decision to renounce nuclear weapons. Baker made a persuasive case that Kazakhstan's national security could be more effectively achieved through economic development and integration in the world economy than through the possession of nuclear weapons.⁸⁹ He indicated that economic assistance would be forthcoming from the United States once Kazakhstan renounced the nuclear weapons on its territory. U.S. officials also indicated that Kazakhstan's development of a peaceful nuclear energy program would be bolstered through membership in the NPT.

Kazakhstan had attached less significance to U.S. financial assistance than did Belarus and Ukraine. According to a senior Kazakh Foreign Ministry official, CTR funds "were not a carrot to remove nuclear weapons," but helped to ease the task of removal once the decision to relinquish the weapons was made.⁹⁰

⁸⁹ Potter, *The Politics of Nuclear Renunciation*, p. 39.

⁹⁰ Ibid., p. 40.

CTR assistance from the United States was thus only a minor factor. The primary decision catalysts for Kazakhstan's decision to sign the Lisbon Protocol and to adhere to the NPT as a non-nuclear-weapon state resided in the international political climate and specific security assurances. The bilateral Treaty of Friendship, Cooperation, and Mutual Assistance with Russia pledged mutual support, including military assistance, in the event that either country was subjected to the aggression of another state. Of equal importance was China's reassurance that it had no territorial claims on Kazakhstan.⁹¹

According to President Nazarbayev, Kazakhstan's change in policy toward the NPT was the result of Russia's security assurances along with U.S. recognition of Kazakhstan as an independent participant in the START I process.⁹² While the Kazakh parliament ratified the Lisbon Protocol to START I in July 1992, it was not until December 1993 that Kazakhstan became a party to the NPT. The United States pledged \$85 million in CTR assistance in conjunction with Kazakhstan's adherence to the NPT as a non-nuclear-weapon state.

B. TRANSPARENCY IN NUCLEAR WARHEAD DISMANTLEMENT AND FISSILE MATERIAL OPERATIONS

An important part of any arms control process is assurance that agreed upon activities are actually taking place. One way to provide this assurance is by increasing the visibility or "transparency" of activities through measures such as inspections, joint visits, and data exchanges. The second key issue of discord among the four schools of thought concerns the level of transparency afforded to U.S. inspectors in Russia's nuclear

⁹¹ Ibid., p. 37.

⁹² Ibid., p. 17.

weapons programs. Increasing the level of transparency within these programs remains one of the greatest challenges of the CTR program.

This section focuses on two Russian nuclear programs in which transparency measures for U.S. inspectors have been consistently absent – warhead dismantlement and fissile material operations. Although the U.S. investment in these programs has well exceeded a billion dollars, their future remains uncertain. The GAO has described programs which lack transparency as “an inherent cost risk” because of the difficulty in determining whether they have achieved their intended purpose.⁹³ Russia’s reluctance to provide the United States needed access to sensitive nuclear materials and facilities has raised questions on how to improve transparency. Some U.S. officials have suggested that current CTR assistance should be temporarily suspended until transparency measures improve. For example, the GAO suggested that Congress might wish to consider linking DoD authority to obligate some or all of the funds that it may provide for constructing a fissile material storage facility in Russia to completion of a transparency agreement regarding the facility’s use. The DoD concurred with the recommendation that construction funds should not be completely disbursed unless and until transparency measures have been agreed upon.⁹⁴ While this issue remains one of significant debate, it is certain that future support for the CTR program will be highly contingent upon transparency agreements.

⁹³U.S. General Accounting Office, *Weapons of Mass Destruction: U.S. Efforts to Reduce Threats From the Former Soviet Union*, Testimony of Harold J. Johnson, Associate Director of International Relations and Trade Issues, National Security and International Affairs Division, before the U.S. Senate Armed Services Subcommittee on Emerging Threats and Capabilities, 6 March 2000. GAO/T-SIAD/RCED-00-119.

⁹⁴U.S. General Accounting Office, *Weapons of Mass Destruction: Efforts to Reduce Russian Arsenals May Cost More, Achieve Less Than Planned*, 13 April 1999. GAO/NSIAD-99-76.

In contrast with the transfer of nuclear weapons to Russia from the three non-Russian republics, an endeavor in which the United States and Russia shared a common interest and cooperated extensively, Russian officials remain reluctant to involve their U.S. counterparts in the actual dismantlement of nuclear warheads. Russia's culture of secrecy remains suspicious of cooperation with its former adversary on sensitive national security issues. Given that Russia's strategic nuclear forces have fallen behind in the "parity race," the Russians are reluctant to disclose information which could deepen their strategic disadvantage. According to Andrei Kokoshin, the Russian Security Council's former Secretary, "It is extremely important today that we safeguard our independence in the field of strategic arms and never 'surrender' Russia's strategic nuclear forces to the control of anyone else."⁹⁵

From a Russian perspective, the government is not obligated to provide transparency measures because it has openly maintained that it does not want, nor does it need U.S. assistance in warhead dismantlement.⁹⁶ However, the United States has noted that CTR assistance was used to help complete the strategic nuclear warheads transfer from the non-Russian republics, and the United States would like to ensure that those warheads were dismantled. Without adequate transparency measures, the United States has no independent means to account for the final disposition of these warheads.

⁹⁵ Kokoshin quoted in indirect discourse in Yury Golotyuk, "Russia Adopts 'Kennedy Criterion,'" from *Nuclear Deterrence Is Possible Even Without Parity With the U.S.*," *The Current Digest of the Post-Soviet Press*, Vol. 51, No. 7, 17 March 1999, p. 19.

⁹⁶ U.S. General Accounting Office, *Weapons of Mass Destruction: Reducing the Threat from the Former Soviet Union*, Letter Report, June 1994. GAO/NSIAD-95-7.

In the absence of adequate transparency measures, some concerned Americans have speculated about Russian intentions.⁹⁷ Critics have argued that that CTR assistance has produced a net gain in Russia's strategic nuclear arsenal, in that the weapons transferred from the three non-Russian republics may be redeployed by Russia. Michael Waller, Vice President of the American Foreign Policy Council, a non-governmental organization, has argued that Russia's continued modernization of its strategic nuclear weapons systems "leads one to conclude that some of these warheads [transferred from Belarus, Kazakhstan and Ukraine to Russia] or their components may be redeployed against the United States and its allies in the future."⁹⁸ Waller specifically notes the redeployment of a regiment of SS-25 mobile intercontinental ballistic missiles, which were transferred from Belarus in late 1996. Despite U.S. expectations that the missiles would be destroyed with CTR assistance, Russia elected to redeploy the missiles a month after the transfer.⁹⁹

While Russia has not sought U.S. help in dismantling its strategic nuclear weapons, it has expressed concern about the lack of storage space for fissile materials from dismantled warheads and has asked the United States for help in designing and constructing a storage facility. Explaining the need for the fissile materials storage facility, Russian officials asserted that the lack of available storage space for nuclear materials would eventually impede their warhead dismantlement efforts. While the

⁹⁷ Selden, "Nunn-Lugar: New Solution for Today's Nuclear Threats," pp. 3-4. Also see Katherine E. Johnson, "Sustaining Nuclear Threat Reduction Programs: The 'Bottom-Up' Approach," in Shields and Potter, *Dismantling the Cold War*, pp. 231-250.

⁹⁸ Michael J. Waller, "Author's Rebuttal to the Department of State [response to his article 'To Russia, With Cash'], " *Demokratizatsiya, The Journal of Post-Soviet Democratization*, Vol. 5, No. 1, winter 1997, p. 129.

⁹⁹ *Ibid.*

United States has to date spent nearly one billion dollars for the facility, negotiations between the United States and Russia have yet to confirm that its activities will be transparent enough to provide the United States with assurances that Russia is storing only materials from dismantled nuclear warheads and that these materials are not being reused to construct new weapons. According to a 1996 GAO report, the failure to reach an agreement on transparency may force the United States to choose between curtailing support for the facility – after investing hundreds of millions of dollars – or accepting a compromised level of access.¹⁰⁰

The lack of transparency in warhead dismantlement and fissile material storage operations also has implications for the U.S.-Russian highly-enriched uranium purchase agreement (also known as the “Megatons-to-Megawatts” agreement). The United States has committed up to twelve billion dollars to purchase 500 metric tons of reprocessed highly-enriched uranium (HEU) from Russia over a period of twenty years. The agreement was initiated in February 1993 by Major General William Burns (Ret.), head of the U.S. Safe and Secure Dismantlement Delegation, and Russian Minister of Atomic Energy Viktor Mikhailov. The agreement calls for Russia to convert HEU from dismantled nuclear warheads into low-enriched uranium (LEU). The LEU is then to be purchased by the United States Enrichment Corporation (USEC), which converts the LEU to power reactor fuel which it may sell to commercial reactors on the open market. The deal calls for Russia to convert no less than ten metric tons of HEU in the first five

¹⁰⁰ U.S. General Accounting Office, *Weapons of Mass Destruction: Status of the Cooperative Threat Reduction Program*, Report to Congressional Requesters, September 1997. GAO/NSIAD-96-222.

years and no less than 30 metric tons annually thereafter. Since 1995, delivery of Russian LEU to the United States has proceeded with few delays. By the end of 1998, the USEC had purchased 50.5 metric tons of HEU from Russia, equal to approximately 2,297 warheads.¹⁰¹

Since the United States is not allowed access to Russia's dismantlement facilities or fissile material storage facilities, Washington has no assurance that this uranium is from dismantled warheads. Officials from the U.S. Department of State have indicated that although the origin of the material cannot be verified, it is important that the fissile material be removed from an environment in which illicit diversion or theft could occur. Critics disagree with this assessment. They maintain that the purpose of the purchase agreement was to secure fissile material derived from dismantled warheads, not to acquire LEU of unknown origin.¹⁰²

Critics also argue that the United States failed, as it has with many of the warhead and fissile material agreements, to use the leverage of the HEU purchase agreement to achieve greater transparency in Russia's nuclear programs.¹⁰³ Critics also contend that the HEU agreement does not contain any provisions which prevent Russia from using this revenue to produce additional HEU to replace that supposedly converted into LEU

¹⁰¹ Kent A. B. Jamison, "Russia: Overview of the U.S.-Russian HEU Agreement," CNS Web Page, February 1999, Revised and Updated June 1999, pp. 1-7. Online: <http://cns.miis.edu/db/nisprofs/russia/fismat/heudeal/heudeal.htm> Also see "U.S.-Russian Agreement on Highly Enriched Uranium," *White House Paper*, 31 August 1992. Available Online: <http://dosfan.lib.uic.edu/acda/factshee/wmd/nuclear/ctr/sandy2.htm>

¹⁰² Waller, "Author's Rebuttal to the Department of State [comments on Waller's 'To Russia, With Cash' Article], *Demokratizatsiya*, p. 135.

¹⁰³ Statement by Michael Waller to the Armed Services Subcommittee on Military Research and Development, U.S. House of Representatives, in "House Testimony on Missile De-Targeting," *American Foreign Policy Council*, 13 March 1997.

and sold.¹⁰⁴ This circumstance reduces any confidence in the nonproliferation benefit that may have been achieved from removing the material from Russia. The HEU agreement also fails to contain any stipulations which require Russia to use the revenue from the sale to underwrite dismantlement activities or to improve safety and security in their nuclear programs.

Russia's refusal to allow oversight and verification procedures in warhead dismantlement and fissile material operations denies the United States the ability to effectively evaluate the impact of CTR assistance and has rekindled mistrust and reservations about Russian intentions. Russia's policy against foreign observation of these key activities has been frequently perceived as an unwillingness to cooperate on the part of the Russian government. Critics hold that the CTR program should be used as leverage to influence Russian behavior and mandate conditional requirements. They advocate terminating program funds if conditional requirements are not met: "continued obligation of funds should be conditioned on our ability to audit and verify Nunn-Lugar's achievements. Without significant improvements in transparency, the benefits of the program can be legitimately questioned."¹⁰⁵

Proponents, on the other hand, contend that the severity of the nuclear threat and the risk of WMD proliferation are so great that the United States must defer to Russia's national security concerns about providing the United States with access to sensitive

¹⁰⁴ Waller, "Author's Rebuttal to the Department of State [response to his article 'To Russia, With Cash'],"*Demokratizatsiya*, Vol. 5, No. 1, Winter 1997, p. 135.

¹⁰⁵ Selden, "Nunn-Lugar: New Solutions for Today's Nuclear Threats," pp. 19-20.

materials and facilities. Proponents maintain that cooperation in this area can be achieved by developing a comprehensive bilateral transparency regime for nuclear warheads and fissile materials. One important advantage of a bilateral regime would be mutual confidence that agreed reductions in strategic and tactical nuclear forces are irreversible.¹⁰⁶

While Russia continues to refuse CTR assistance in warhead destruction, its stance appears to be softening as conditions continue to worsen in Russia's strategic arsenal. In September 1999, Russia asked the DOE to expand joint projects aimed at securing nuclear fuel. Through the joint efforts, Russia hopes to create a facility to dismantle submarine reactors and secure nuclear fuel. Energy Secretary Bill Richardson indicated that the Russian proposal incorporates an unusual provision that would provide the United States greater access to highly sensitive sites previously barred to foreigners. According to Richardson, the Russian proposal followed a rare tour of one of Russia's largest and most sensitive nuclear naval bases on the remote Kamchatka peninsula.¹⁰⁷

C. FEDERAL AGENCIES SHARE CTR RESPONSIBILITIES AND COSTS

The third issue of discord concerns the agreement to move non-weapons CTR programs out of the Department of Defense budget to that of other federal agencies. The Soviet Nuclear Threat Reduction Act of 1991 was aimed at the destruction of weapons and the prevention of weapons proliferation. When the program began to expand to non-

¹⁰⁶ Steve Fetter, "A Comprehensive Transparency Regime For Warheads and Fissile Materials," *Arms Control Today*, January/February 1999. Available Online: <http://www.armscontrol.org/ACT/janfeb99/sfjf99.htm>

¹⁰⁷ Richardson quoted in Judith Miller, "Russia Asks U.S. to Expand Nuclear Cleanup, Even to Secret Sites," *New York Times*, 30 September 1999, p. A9. Also see "Richardson Praised Russians After Nuclear Submarine Tour," *Washington Times*, 4 September 2000, p. 13.

weapons-related efforts, congressional support began to wane. The transfer of CTR responsibilities to other federal agencies, primarily the U.S. Departments of Energy and State, was a means of transferring some of the costs in order to sustain the program under its new concept of “defense by other means.” While the dispersion of responsibilities temporarily appeased critics, in many ways it was counterproductive, causing confusion with recipient states, as well as program redundancy and fragmentation or gaps in program coverage. According to Rose Gottemoeller, “this ‘achievement’ has been at a major cost to the president’s ability to pursue his nonproliferation policy goals.”¹⁰⁸

The support given to the three non-Russian nuclear successor states set an important precedent in the allocation of CTR funds that significantly deviated from the initial congressional understanding of the program. In return for their willingness to give up strategic nuclear weapons – which their governments had already pledged to do when they became parties to the START I agreement – the Clinton administration offered the three non-Russian republics considerable CTR assistance, including housing for retired Strategic Rocket Force officers, environmental cleanup of areas that had been devastated by Soviet nuclear testing, and the conversion of former WMD industries to commercial enterprises. The administration’s expanded use of defense funds was a marked departure from the original congressional understanding of the CTR program. Congress had originally approved the use of the defense budget to advance U.S. national security interests by helping the Soviet nuclear successor states secure and destroy their weapons

¹⁰⁸ Rose Gottemoeller, “Presidential Priorities in Nuclear Policy,” in Shields and Potter, *Dismantling the Cold War*, p. 70.

of mass destruction.¹⁰⁹ The congressional committees with jurisdiction over the CTR program were less enthusiastic than the administration about the expanded approach; and in some cases they strongly objected to the use of defense resources for projects that more closely resembled foreign aid than defense.¹¹⁰

In an effort to preserve the program and regain congressional support, the CTR program was restructured in 1996, initially with the Departments of Defense, Energy and State. It took several years to find an accepted distribution of responsibilities among various federal agencies. Since the initial participation by the DOE and DOS, other federal agencies, including the Department of Commerce (DOC), the Federal Bureau of Investigation (FBI), and the U.S. Customs Service, now share responsibilities under the CTR umbrella. The DOD primarily retains WMD threat reduction efforts while other federal agencies oversee projects characterized as nonproliferation assistance efforts.

In many cases, the U.S. federal agencies work together to accomplish common objectives. While this process may result in a larger pool of resources, the distribution of responsibilities is sometimes unclear and confusing. For example, although the Department of State has executive responsibility for export control assistance programs, all six agencies play a role. The State Department funds and coordinates the programs through the Nonproliferation, Anti-Terrorism, Demining and Related Programs (NADR) fund and the Nonproliferation and Disarmament Fund (NDF).¹¹¹ Both the NADR and the

¹⁰⁹ United States Public Law 102-228, Title II-Soviet Weapons Destruction, Sec. 201, *Soviet Nuclear Threat Reduction Act of 1991*, 12 December 1991.

¹¹⁰ Richard Combs, "U.S. Domestic Politics and the Nunn-Lugar Program," in Shields and Potter, *Dismantling the Cold War*, pp. 50-55.

¹¹¹ Scott Parrish and Tamara Robinson, "Efforts to Strengthen Export Controls and Combat Illicit Trafficking and Brain Drain," *The Nonproliferation Review*, Vol. 7, No. 1, Spring 2000, p. 113.

NDF are subject to different guidelines and controls that limit the types of programs which are eligible for funding. Most DOS funding is directed at training programs that focus on internal compliance and regulations for trade in sensitive technologies. The Department of Commerce also participates in export control programs; however, in most cases the DOC must apply for funding from the State Department through the NADR and NDF. The DOC also receives funding for export control assistance through the DOD, the U.S. Customs Service and the FBI. These programs focus on areas such as licensing procedures, regulation development, and industry-government coordination. The DOE is also involved in export programs which focus primarily on the nuclear sectors of Russia, Ukraine and Kazakhstan. The DOE performs many of the same functions as the DOC, including the development of licensing procedures, promoting multilateral standards of conduct, and providing English-language training for Russian, Ukrainian and Kazakh export control officers.¹¹²

In addition to export control assistance, the agencies also provide support to programs that strengthen border controls and block illicit trafficking, as well as programs which combat the “brain drain” of WMD specialists. The multifaceted, multilateral programs provide a wide spectrum of support in the area of nonproliferation. Although the DOD is the executive agency for the CTR program, many of the nonproliferation efforts receive funding from other authorities. For the most part, the DOD remains disengaged from the non-weapons nonproliferation activities. Because the CTR program lacks a central controlling agency, the complex array of organizations and funding

¹¹² Ibid., p. 113.

authorities often results in competition, inter-agency turf battles, overlap, and in some cases, gaps in program coverage.¹¹³ The multiplicity of agencies and personnel turnover also create confusion and program delays with recipient states. In many cases, because of the large number of U.S. officials involved in a single program, officials from the recipient states are reluctant to form close working relationships. Efforts such as the centralization of programs under one agency might facilitate the distribution of funds and improve coordination efforts among and within U.S. agencies and recipient states.

D. EXPANDING THE CTR: “MISSION CREEP” AND “SLIPPERY SLOPES”

The final issue of discord involves the expansion of CTR programs to areas beyond the scope of the CTR’s core competencies. This problem is typically referred to as “mission creep” and “slippery slopes.”¹¹⁴

“Mission creep” is the extension of CTR programs to areas which do not directly address the CTR’s core objectives. The most common areas of mission creep involve nonproliferation programs that do not directly involve weapons dismantlement programs such as providing housing for retired Strategic Rocket Force officers and defense conversion projects. “Slippery slopes” represent another form of deviation from the central focus, usually because of a preoccupation with small details instead of the broader problems. According to its critics, the CTR program’s investment in the Mayak fissile

¹¹³ Pete V. Domenici, “Assessing U.S. Dismantlement and Nonproliferation Assistance Programs in the Newly Independent States,” Senator Domenici addresses the NISNP Conference 11-13 December 1999 at the Center for Nonproliferation Studies, Monterey Institute of International Studies, Monterey, California. Comments Available Online: <http://cns.miis.edu/cns/projects/nisnp/ctrconf/spch01.htm>

¹¹⁴ John W.R. Lepingwell and Nikolai Sokov, “Strategic Offensive Arms Elimination and Weapons Protection, Control, and Accounting,” *The Nonproliferation Review*, Vol. 7, No. 1, Spring 2000, p. 70-72.

material storage facility has been plagued by the slippery slope problem.¹¹⁵ The program began as an agreement to share the costs with Russia – with the U.S. share not to exceed \$275 million – for the design and construction of a fissile materials storage facility for dismantled warheads. The project has now expanded to include much of the facility's infrastructure, such as roads, a bus station, and a car wash. U.S. involvement has also expanded to now include the packaging and transport of fissile materials to the storage area, and it may eventually include funding the daily operational costs of the long-term storage.¹¹⁶

The “mission creep” and “slippery slope” problems reflect the nature of the WMD proliferation threats and the flexibility of the CTR mandate. Many of the proliferation threats involve areas that are environmentally sensitive and interconnected. Responding to a threat in one area may result in the creation or increase of another threat. For example, transferring the strategic nuclear warheads from the non-Russian republics to Russia and dismantling them increased the quantity of fissile material available for potential theft or diversion to a rogue nation or terrorist group. This in turn created the need for more secure storage facilities. In addition, because fissile material is potentially easier to divert than a warhead itself, the storage sites for fissile material must maintain a high level of security and therefore require extensive security upgrades. The elimination of strategic submarines is another example of unanticipated complications.

¹¹⁵ Ibid., p. 70.

¹¹⁶ U.S. General Accounting Office, *Weapons of Mass Destruction: Efforts to Reduce Russian Arsenal May Cost More, Achieve Less Than Planned*, Letter Report, 13 April 1999. GAO/NSIAD-99-76.

A submarine cannot be dismantled without dealing with its components, many of which may present greater proliferation risks once removed. Nuclear reactor cores, liquid fuel, and solid-fuel motors are all sensitive components that create an additional need for the expansion of CTR programs.

The problems of the Russian economy and its effects on the military also create the potential for “mission creep” and “slippery slopes.” In some cases, despite the extensive level of CTR assistance, the lack of basic essentials creates a proliferation hazard. For example, the upgrades at most weapons storage sites included the installation of high technology security equipment such as microwave and infrared sensors, security cameras and intrusion detection alarms. However, despite the increased level of security that this equipment may offer, it is useless if the government cannot pay its utility bills and the electricity is shut off. In addition, if the soldiers at the weapons storage sites do not have cold weather uniforms, they will likely be reluctant to respond to an alarm during the winter. Similarly, if the soldiers are untrained on the equipment, any security benefits that it might have provided will be lost. Equipment such as highly sensitive monitoring devices may initiate an alarm on a frequent basis. In such cases, when alarms or other equipment become a nuisance, the equipment may be simply turned off, again losing any potential security benefit it might have been able to offer.

While the nature of the WMD proliferation threat and the problems of the Russian economy may have created a situation in which “slippery slopes” and “mission creep” are virtually unavoidable, critics argue that officials involved in the administration of the CTR program – both U.S. and Russian – have added to the problem. Critics disapprove

of expanding the scope of the CTR program to non-defense-related activities.¹¹⁷ Many argue that the administration set a costly precedent when it “rewarded” the three non-Russian republics for relinquishing their strategic nuclear warheads to Russia. Critics argue that the republics quickly learned that if they refrained from committing to a nuclear warheads transfer program, they could use their commitment as leverage in exchange for a greater economic package from the United States. A recent review of CTR programs indicates that this use of leverage has converted the CTR program into a “funding source of first resort” for many support activities. A review of CTR programs in Russia and Ukraine indicated that when a problem emerged requiring additional funds, host officials tended to seek assistance from the United States before considering if it could be handled internally.¹¹⁸

Critics assert that the U.S. taxpayers are paying the costs associated with “mission creep” and “slippery slopes.” To the extent that the curtailment of one threat often creates another, this problem may be unavoidable. In other cases, however, closer oversight and the restriction of CTR assistance to core objectives could prevent CTR funds from supporting projects that can and should be funded by the host nations. The problem of “slippery slopes” and “mission creep” is used to corroborate the strongest criticism of the CTR program – that it allows Russia to modernize its strategic nuclear forces (and other military capabilities) by covering costs that would otherwise have to be

¹¹⁷ Waller, “Authors Rebuttal to the Department of State,” pp. 127-128. Also see Shields and Potter, *Dismantling the Cold War*, pp. 48-49.

¹¹⁸ John W.R. Lepingwell and Nikolai Sokov, “Strategic Offensive Arms Elimination and Weapons Protection, Control and Accounting,” *The Nonproliferation Review*, Vol. 7, No. 1, spring 2000, p. 71.

paid by the Russian government. If the problem of “mission creep” and “slippery slopes” is not effectively managed, it may endanger the political viability of the CTR program.

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IV. THE CTR PROGRAM: FUTURE PROSPECTS

The public debate in the United States suggests that the CTR's scorecard is characterized by clear successes as well as significant shortfalls. Supporters insist that the CTR program has been one of the most significant achievements in U.S. foreign policy since the end of the Cold War. However, the cost of implementing many CTR projects has substantially escalated; and conclusively demonstrating that these projects have supported U.S. national security interests has proven to be difficult. While CTR program shortfalls are often more readily apparent than successes, there is considerable agreement among the schools of thought surveyed in this thesis that the United States must remain at a minimum selectively engaged with Russia on matters which affect the national security of the United States and its allies.

The CTR program has been one of the most useful instruments in this regard. The structure of the CTR program necessitates close working relationships. Some of the most durable U.S.-Russian relationships have survived periods of high tension between the United States and Russia. For example, during the NATO bombing campaign against Yugoslavia in 1999, Russia suspended some forms of cooperation with NATO and with specific Allies, including the United States. Interactions under the CTR program continued, however, even during the NATO air strikes against Yugoslavia.

A. CTR PROGRAM ADDRESSES FULL SCOPE OF RUSSIAN THREATS

The CTR program remains a principal source of U.S.-Russian interactions regarding WMD proliferation and associated safety and security matters. Evidence suggests, however, that neither country has provided enough funding and sustained

political attention to make these efforts fully successful. The CTR's successes in curtailing the threat of WMD proliferation will remain limited if the program is restricted to the weapons arena. The benefits of the CTR can only be fully realized if the program employs a broad policy which addresses the full scope of the proliferation crisis. This thesis concludes that the CTR program's contributions to countering WMD proliferation could be more effectively pursued if the United States enhanced the quality of the CTR and worked cooperatively with Russia and the other nuclear successor states of the former USSR to address the full spectrum of common interests.

This thesis finds a wide consensus among observers in the more mainstream schools of thought (the Program Advocates and the Strong Critics) that the CTR programs which successfully achieve their goals go beyond an initial agreement on shared involvement in the prevention of WMD use and proliferation to encompass full cooperation in practical tasks. This requires a dedicated effort from both the United States and Russia. However, even with extensive cooperation, the proliferation risks cannot be contained until threats to Russia's national security are addressed. In January 2000, Russia's new National Security Concept defined the economic crisis and the social and political instability as the principal threats to Russia's national security.¹¹⁹

Nuclear proliferation is not a problem that the United States can solve with a pigeonhole approach. Evidence suggests that in order to effectively address the threat of WMD proliferation, the United States must support democratization efforts in Russia.

¹¹⁹ "Russia's National Security Concept," *Moscow Nezavisimoye Voennoye Obozreniye*, 14 January 2000, trans. FBIS Document ID: FTS20000116000515.

Sustainable economic prosperity is also an essential condition for long-term prevention of WMD proliferation. To fully address the causes of WMD proliferation, the United States must adopt a multifaceted approach that brings together perspectives on Russian politics, economic reforms, national security, foreign relations and weapons proliferation. "The United States must reduce the gap between its pronouncements about the dangers of the spread of WMD and its investment of political capital in strengthening nonproliferation treaties, institutions, and relationships."¹²⁰

B. BEYOND THE NUCLEAR ARENA

In 1999, the CTR program was officially extended until 2006. This extension and the yearly CTR budget allocations are subject to the discretion of the U.S. Congress. The new Administration, which will take office in January 2001, is likely to be a significant influence in determining the extent of future support for CTR and other nonproliferation efforts. In addition, while the dangers of WMD proliferation are likely to remain indefinitely even if strong U.S. support for CTR continues through 2006, long-term support after that date is likely to depend on the existing political and economic environment within both the United States and Russia.

The CTR program's survival, through and beyond 2006, will likely depend on its ability to demonstrate and quantify its success. Nonproliferation can be discussed in terms of what has been done to help prevent the spread of WMD; however, the success or failure of nonproliferation efforts is difficult to ascertain with a high degree of

¹²⁰ William C. Potter and Jonathan B. Tucker, "Weapons Spreading," *Washington Post*, Op-Ed, 28 May 1999, p. A35, in *CNS Reports*, Center For Nonproliferation Studies, Monterey Institute of International Studies, June 1999. Available Online: <http://www.cns.miis.edu/purb/reports/tuckpot.htm>

confidence. In light of this difficulty, proponents of the CTR program may seek to justify its continuation by identifying additional areas that could potentially benefit from CTR assistance. Some advocates have considered the potential for the CTR program to expand beyond the WMD arena. For example, the dismantlement of the Russian submarine fleet, specifically the non-strategic nuclear-powered submarines, is not funded by the CTR program. While Russian officials have requested that CTR assistance be provided for this purpose, they have caveated their request by emphasizing that the dismantlement of newer strategic submarines, an effort eligible for funding by the CTR program, will not be authorized prior to the dismantlement of attack submarines and other early generation vessels, regardless of the CTR protocol.¹²¹ Conforming to this Russian caveat would require changes in the U.S. legislation governing CTR activities.

The expansion of the CTR program to support the dismantlement of non-strategic submarines is an example of what critics have condemned as “the evolutionary trend towards ‘mission creep’....”¹²² Critics have maintained that non-weapons programs will erode support for the CTR program as a whole. It is not clear whether (or to what extent) “mission creep” must be tolerated in order to pursue the long-term benefits of preventing proliferation.

C. INTERNATIONAL EVENTS UNDERMINE CTR PROCESS

U.S.-Russian disagreements about major international events in recent years have weakened the U.S.-Russian cooperative relationship and threaten to undermine the

¹²¹ Igor Kudrik, “International Cooperation Radiation Safety in the Russian Navy,” *The Nuclear Chronicle From Russia*, 28 February 1999. Available Online: <http://www.bellona.no>

¹²² Ellis, “Nunn-Lugar’s Mid-Life Crisis,” p. 100. See also Lepingwell and Sokov, “Strategic Offensive Arms Elimination and Weapons Protection, Control, and Accounting,” p. 70.

nuclear nonproliferation system. Russia responded to some of these events by temporarily suspending certain forms of cooperation with the United States and other NATO allies. Russia's reactions to these events confirm the importance of its nuclear arsenal for security and prestige. Russia's continued cooperation in nuclear threat reduction efforts reinforces the conclusion that an effective nonproliferation policy can no longer address the nuclear agenda as an isolated issue.

Russia's response to NATO's 1999 bombing campaign against Yugoslavia included a change in its nuclear agenda. Russia was outraged, and characterized NATO's use of force as "undisguised aggression."¹²³ Russia responded by suspending certain forms of cooperation with the United States and other NATO countries and by halting all discussion by the Russian parliament of ratifying the Strategic Arms Reduction Talks (START) II treaty. For Russia, NATO's actions set a dangerous precedent, in that NATO had used force without the explicit authorization of the UN Security Council. Russia's perception of NATO's actions is reflected in its January 2000 National Security Concept. The 2000 National Security Concept expresses Russia's perception that NATO uses force freely and will not hesitate to use it against Russia over political disagreements. "NATO's transition to the practice of using military force outside its zone of responsibility and without UN Security Council sanction could destabilize the entire global strategic situation." The 2000 National Security Concept also acknowledges that at the present time, operational and combat training in the Armed Forces of the

¹²³ Boris Yeltsin quoted in Sevodnya, 25 March 1999, in "NATO Strikes Serbia, Russia Is 'Outraged,'" *The Current Digest of the Post-Soviet Press*, Vol. 51, No. 12, April 1999, pp. 1-2.

Russian Federation are at a “critically low level.” The National Security Concept indicates that the Russian Federation “envisages the possibility of employing military force to ensure its national security.” The doctrine specifies: “the use of all available forces and assets, including nuclear weapons, in the event of need to repulse armed aggression, if all other measures of resolving the crisis situation have been exhausted and have proven ineffective.”¹²⁴

Although U.S.-Russian relations soured over NATO’s bombing operation, cooperative efforts under the CTR program effectively remained unchanged. A visit by General Thomas Kuenning, a leading CTR official, was initially cancelled when the bombing campaign began. The visit was quickly rescheduled after Russian authorities apparently decided that the CTR program was “too important to be sacrificed out of solidarity with the Serbs.”¹²⁵ The CTR program’s ability to continue operations during periods of high tension is a good indication that both the United States and Russia recognize that the CTR program offers significant advantages for both countries and that it is in their best interest to sustain the program. According to a Russian journalist specializing in international security matters, “the obvious benefits deriving from the Nunn-Lugar program are a good guarantee that it will be the last program to be shut down if relations continue to deteriorate, and the first to be revived as soon as another warming trend arrives in relations between Moscow and Washington.”¹²⁶ It is also a

¹²⁴ “Russia’s National Security Concept,” *Moscow Nezavisimoye Voennoye Obozreniye*, 14 January 2000, trans. FBIS Document ID: FTS20000116000515.

¹²⁵ Pavel Felgengauer, “How to Pillory an ‘Aggressor’ and Still Get Money Out of It,” *Sevodnya*, 21 May 1999, in *The Current Digest of the Post-Soviet Press*, Vol. 51, No. 20, June 1999, p. 19.

¹²⁶ *Ibid.*

good indication that if relations again deteriorated, the CTR program will likely be the last to shut down and the first to be revived once relations improved.

For Russian officials, the advantages of ratifying the START II treaty were not as easily recognized as those of the CTR program. It was nearly a year after NATO's air campaign against Yugoslavia before the Russian parliament (Duma) agreed to reconsider the START II treaty. After more than seven years of delays, the Duma finally approved ratification of START II on 14 April 2000. After the upper house of parliament approved the resolution of ratification on 19 April, it was signed by President Vladimir Putin on 4 May 2000. The central importance of START II was that it opened the path for further nuclear weapons reduction negotiations between Russia and the United States under START III. Russia's ratification of START II was also intended to prevent the United States from withdrawing from the 1972 Anti-Ballistic Missile (ABM) Treaty, which prohibits the deployment of a national missile defense (NMD). The Duma's resolution of ratification included a conditional provision which requires the United States to ratify the 1997 ABM Treaty demarcation agreement before START II can enter into force. The provision reaffirmed Russia's position, which has maintained a strong link between the ABM treaty and continuation of the START process.

Russia's ratification of START II presented an international image of Russia as the leading proponent of nuclear threat reduction. A subsidiary purpose of ratification was to provide Russia leverage on two additional issues of contention: NMD and the enlargement of NATO. The strong link which Russia has maintained between its nuclear arsenal and decisions about NMD and NATO enlargement sends a message to

Washington and Brussels: these issues must not be considered in isolation from Russian interests. In Russian eyes, the nuclear arsenal is the last guarantee of Russia's state sovereignty. Given the weakened state of its conventional forces, it is unlikely that Russia will agree to further reduce its nuclear arsenal if it feels threatened by the NMD or NATO enlargement projects.

In addition, each additional crisis threatens to further weaken the U.S.-Russian relationship. According to Senator Richard Lugar, "Each succeeding crisis and subsequent efforts at restabilization of the relationship has come at the cost of lower levels of trust and confidence which, in turn, provide more fertile ground for the seeds of the next crisis."¹²⁷ Although the CTR program survived the antagonism created by the NATO bombing of Yugoslavia, the cooperative relationship created under the CTR program may be weakened by future crises. The importance of the U.S.-Russian relationship will no doubt be considered as part of the NMD and NATO enlargement decision-making processes.

D. BUILDING A NONPROLIFERATION CULTURE

As projects in the non-Russian republics come to fruition, the focus may gradually shift to Russia exclusively. While additional U.S. resources will likely be available, the Russians can expect the United States to require closer oversight and increased transparency. Many projects in weapons dismantlement and fissile material security require continued emphasis and CTR-sponsored support. A major commitment

¹²⁷ Senator Richard Lugar addresses the Monterey Institute of International Studies, "Assessing U.S. Dismantlement and Nonproliferation Assistance Programs in the Newly Independent States," *Center for Nonproliferation Studies: Newly Independent States Nonproliferation Conference*, 11-13 December 1999.

by Russia to actively participate and support the objectives is mandatory. Along with greater transparency in warhead dismantlement and fissile material storage activities, Russia will need to provide the United States and other donor states with positive assurances that it is not participating in the transfer of nuclear technologies or weapons expertise or otherwise contributing to WMD proliferation.

Another area of concern is Russia's dedication to sustain nonproliferation programs once U.S. assistance is terminated. This thesis identifies a common theme in the analytical literature: the risk that if Russia fails to develop an enduring "safeguard culture," much of the CTR assistance will prove to have been to no avail. An enduring safeguard culture will require a strong commitment from Russia, along with the resources to sustain the CTR-initiated programs once U.S. assistance is discontinued. Currently, U.S. assistance under the CTR program is scheduled to terminate in the year 2006. Russia's current financial crisis means, however, that Moscow may find it difficult to maintain nonproliferation programs without external assistance.

The United States can help Russia build a safeguard culture by working cooperatively to implement sound economic reforms that will build a strong market economy. In this respect, it is imperative that current assistance from the United States be dedicated to more than nuclear threat reduction. The United States can help Russia and the other Soviet successor states develop their economies by focusing current and future aid programs on building self-sustainable, non-military industrial enterprises in the former Soviet Union. CTR efforts should support WMD-focused activities that decrease

the long-term threat as well as the economic pressure to continue to produce and market WMD-related technologies.

Non-weapons-focused assistance programs will, however, be difficult to sell to the U.S. Congress, which has already questioned many projects that do not directly support weapons dismantlement. Thus, if Russia is to build an enduring WMD safeguard culture that actively supports nonproliferation projects of its own, the United States must begin to instill the importance of this culture among the leaders of both countries. A safeguard culture dedicated to the containment of WMD proliferation is in the best interests of both Russia and the United States. As a long-term investment in countering the threat of WMD proliferation and the potential for WMD terrorism, the years of CTR assistance that remain must be focused on helping Russia implement appropriate political and economic reforms that will enable Russia to successfully achieve and sustain a safeguard culture in the future.

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